

THE POLAR TIMES



"NOVEMBER": A painting by Rockwell Kent

A NEW COMMUNITY SPRINGS UP ALONG THE ALCAN HIGHWAY



Kluane Lake Camp, a mixture of tents, log cabins and clapboard barracks



A command car comes down a grade on the 1,600-mile wilderness road

The Polar Times

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The New Northwest Passage

By Ernest Gruening

Governor of Alaska

ONE can now drive by automobile from Washington, D. C., to Fairbanks, Alaska. The long-dreamed-of, long-discussed North American Highway is a reality.

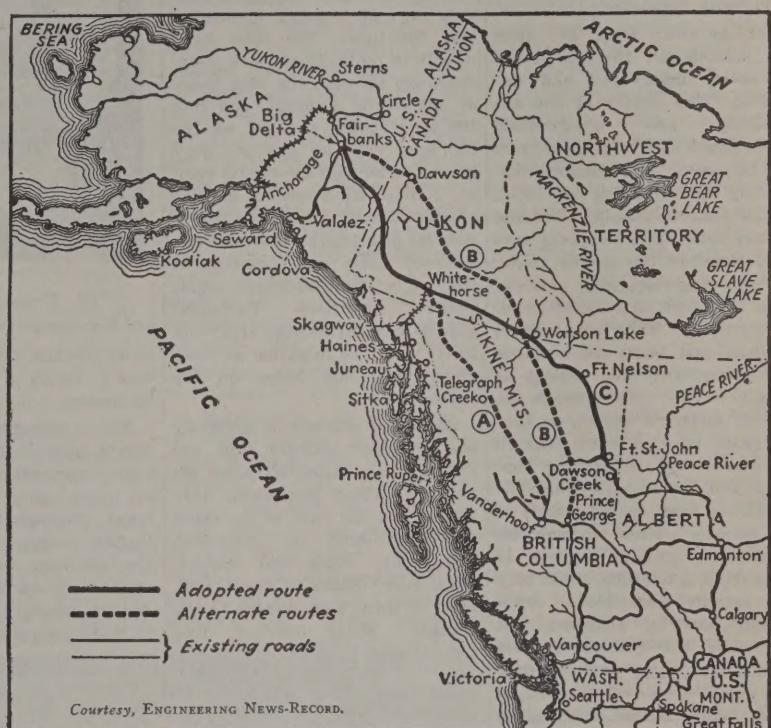
The cutting of a ribbon, a few speeches, toasts, the reading of messages of congratulation and other appropriate ceremonies on Nov. 20 at the point where the highway cuts the Alaska-Yukon Territory boundary, midway between the 62d and 63d parallels of North Latitude, marked the official opening of the Alcan Highway. There amid the stillness of snow-laden spruces, in the long, deep blue shadows of the mighty peaks of the Alaskan Range, gathered the representatives of the United States, of the Dominion of Canada, of the Provinces of Alberta and British Columbia, of the Yukon Territory and of the Territory of Alaska.

They convened there to celebrate a great achievement, to signalize another link in a unique international friendship, and to inaugurate a new and potent undertaking against a common enemy.

For in an incredibly short span of time, overcoming unprecedented obstacles, American enterprise, energy, resourcefulness, determination and grit have accomplished a monumental task. Never before, in all history, has so long a stretch of road been constructed so quickly. The credit for the execution of this vast project belongs to the officers and men of the United States Army Engineers, and to the United States Public Roads Administration.

Begun late in March with the hasty transportation of men and machinery across miles of frozen prairie, by air, to the recently established airports along the route, and to the frozen lakes in the Far Northern forests—some 1,540 miles of new highway have been built. (Certain stretches of road already existing were utilized.) By attacking the wilderness at scores of points, working in both directions, in scarcely eight months the new road was driven from the railhead of Dawson Creek, some 500 miles north of Edmonton to Big Delta, on the Richardson Highway, 100 miles southeast of Fairbanks.

A highway linking the United States to Alaska has been under serious discussion for nearly a decade and a half. Donald MacDonald of Fairbanks, an en-



Courtesy, ENGINEERING NEWS-RECORD.

Map of new Alaskan Highway ("C" route) showing alternate routes.

Engineer of the Alaska Road Commission, is generally deemed the author of the original proposal. Others may also have had the same idea, but to MacDonald belongs the credit for agitating and promoting it fervently and untiringly. Commissions representing the United States and Canadian Governments were appointed in 1930, a reconnaissance study of a route from the State of Washington to Fairbanks involving 1,183 miles of new construction was made and in 1933 the American commission declared the project feasible and proposed negotiations with the Canadian authorities.

NOTHING happened, however, and in 1938, Representative Warren G. Magnuson of Seattle secured the passage of an act calling for the appointment by the President of a new commission to revive and restudy the project and enter into discussions with a corresponding Canadian commission. Both these commissions, after further investigations and surveys, reported favorably, and the American commission did its utmost to interest the military authorities of both countries in the proposal. It was not until several weeks after Pearl Harbor that

they were galvanized into action and brought to appreciate the need of connecting Alaska, steadily developing as an area of defense and potential offense, by other than sea and airborne traffic with the United States.

It was war that finally brought the highway into being.

The lateness of the decision influenced, indeed determined, the choice of route. In the preceding year new airfields in the interior of Canada, hewn out of the wilderness, were forging a new airlink to Alaska, constituting a line safe from possible enemy attack and providing an alternative to the sometimes weather-bound coastal route which had been established in June, 1940. A road connecting these airports, both in order to supply them with fuel, and to serve as a guide for aviators in peril of losing their way in the vast, poorly charted northern stretches was deemed essential. (The pilot, a North-West Airlines veteran, who flew me from Whitehorse to Edmonton early in November, told me that the route even before completion had proved invaluable to flyers during low ceilings and stormy weather.) Under these circumstances they followed the road closely, flying just over the tree tops.

So the road already reaching Fort St. John was extended to Fort Nelson, to Watson Lake and to Whitehorse. From there the highway coincides with the previous recommendation of the American Highway Commission, and passes along the south shore of Kluane Lake, straight up the broad Tanana Valley until it connects with the Richardson Highway.

But between Fort St. John and Whitehorse, the new route had been unsurveyed and unstudied. The extent of the engineering and construction achievement may be gauged from the necessity of reconnoitering, locating and building the road almost simultaneously. But the already constructed airports having determined the general route; the desirable locations between them were first checked by aerial photography. Here were applied the new and improved methods of stereography—the taking of parallel strip photographs at slightly different angles, so that the pairs when viewed through the stereoscope reveal the contours and throw into relief the variations and characteristics of the terrain. Thus without the painstaking ground surveys of other days, a tolerable relief map was rapidly assembled. Some ground locating followed, but meanwhile the bulldozers were already at work, pushing over the great trees of the virgin forest, while behind them raced thousands of men riding the most modern and effective road building machinery.

WHEN the snows began to melt under the warmth of the long Northern May days and the ground to thaw, construction began with a vigor and drive that from the start achieved new speed records. Nearly every variety of soil and terrain was encountered. When the route entered long stretches of muskeg—the bog of the North Country—this was corduroyed, the abundant timber along the road indicating that method, rather than the slower and perhaps more permanent alternative of digging out the muck down to the underlying bedrock and filling in the excavation.

Many rivers were encountered. Pontoons were used to cross many of them; ferries were established over the lakes, but before long bridges were driven down with piling from the adjacent pine and spruces and quickly set-up saw mills supplied the planking. Sap ran from the

piling while it was being driven. In the Rockies, which the route crosses almost transversely, rock work and blasting both cleared the path and furnished much of the construction material. The highest pass through the mountains is approximately 4,000 feet.

THE blazing of this great trail is a saga of courage, endurance and fortitude. The men lived mostly in tents. They worked unceasingly through the long hours of sub-Arctic sunlight, and into the lengthening twilight as the Summer wore on and the days grew shorter and the nights colder. Neither icy winds nor swollen glacier streams gave them pause. Several men lost their lives—victims of their own bravery in working without hesitation under perilous conditions. Turbulent glacier streams claimed their victims; they died in action as truly as if they had fallen on the battlefield.

Skilled direction was given by the engineer officers and the Public Roads Administration—that veteran organization which has built so many miles of superb highways throughout the United States—worked side by side of the engineer regiments. They built some sections of road in Alaska wholly. Elsewhere they followed immediately behind the

GOVERNOR OF ALASKA



Times Wide World

Dr. Ernest Gruening

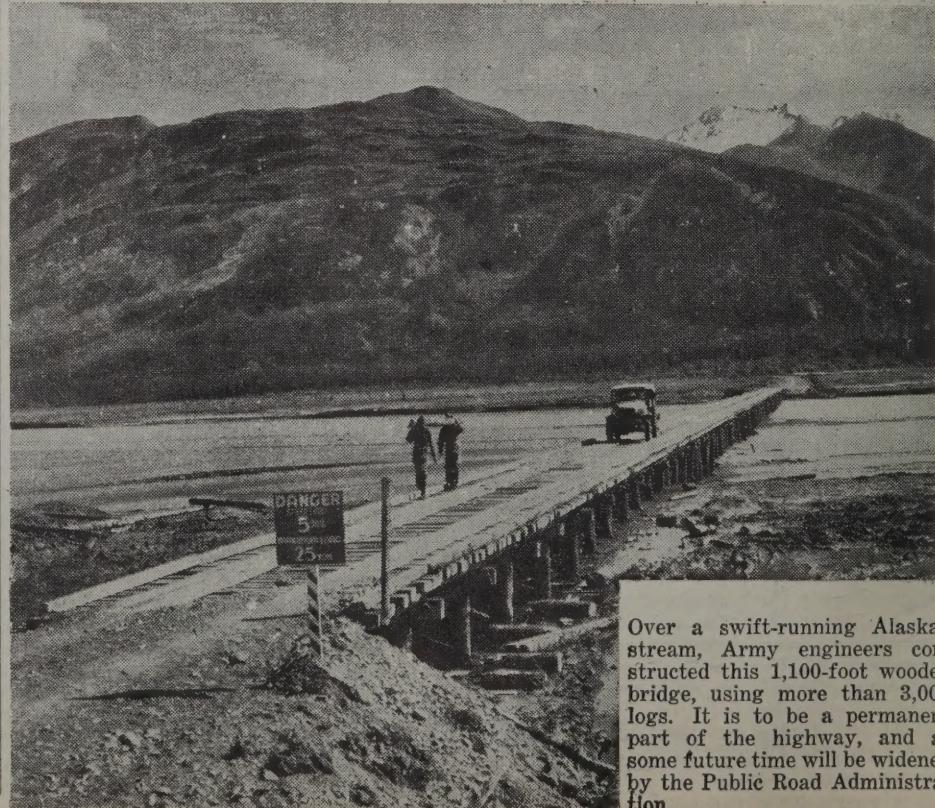
tools for the first time. Theirs was a victory of spirit as well as of brawn.

The contractors of the Public Roads Administration—that veteran organization which has built so many miles of superb highways throughout the United States—worked side by side of the engineer regiments. They built some sections of road in Alaska wholly. Elsewhere they followed immediately behind the

engineers, widening, grading, filling. The result has been a much better highway than the "pioneer road" first contemplated by the Army and believed by it to be all that could be accomplished in the first season of construction. The road now varies in width between eighteen and thirty feet. At a few difficult gorges it is as narrow as ten. Its steepest grade is 15 per cent. And trucks carrying supplies to the airports along the way have already rolled northwest from Dawson Creek. As the ground freezes solid the traffic will increase.

Yet it should not be thought that the road is completed, or nearly so. To make this point unmistakably clear is in no sense to detract from the magnitude of the accomplishment to date. Secretary Stimson, in announcing the opening of the highway, stated that it would be closed for perhaps two months next Spring during the thaws. This is an interlude expected by those who know the North Country and its road problems.

WHEN the eternally frozen ground thaws on the surface, roads become morasses, trucks and tractors can sink out of sight in them. The melting mountain snows swell the glacier



Over a swift-running Alaskan stream, Army engineers constructed this 1,100-foot wooden bridge, using more than 3,000 logs. It is to be a permanent part of the highway, and at some future time will be widened by the Public Road Administration.

streams into thundering torrents that will tear out many of the bridges. All of these—and there are hundreds of them—are, of course, of wood and temporary. Many will have to be replaced by steel spans; others will have to be rebuilt higher and stronger, perhaps relocated to meet the stress of raging waters. The culverts likewise are of wood and will have to be made permanent. The road will have to be widened. It will have to be surfaced. It will have to be filled in and built up. Experience will indicate where it will have to be relocated.

Public Roads Administration officials expect three or four years of work before conventional "maintenance" begins. They will shortly, through contractors, take over much of this work, while the control of the highway region and its transportation, established as the Northwest Service Command, will be under the Army engineers headed by Brig. Gen. James A. O'Connor.

But even more important than the improvement of the existing new construction is the fact that additional highway building is under way to insure a maximum of transportation in a minimum of time. The terminus and objective of the Alcan Highway is not Fairbanks, nor any one other spot in Alaska, but all Alaska. Simultaneously the Glenn Highway, a transverse east-to-west highway connecting the system of roads out of Anchorage near which the Alaska Defense Command has its headquarters with the Richardson Highway, is being rushed to completion by the Alaska Road Commission. The Glenn Highway will meet the Richardson Highway at Copper Centre. Twenty-five miles to the north, at Gulkana, a branch road swinging east to Nabesna will, at Slana, be connected with a branch highway leaving the Alcan Highway at Tanana Crossing.

BY next Summer it will be possible to drive to Anchorage as well as Fairbanks. Anchorage-bound passengers and freight will leave the Alcan Highway 250 miles this side of Fairbanks and, heading southwestward through the Cobb Lakes, skirt the Wrangell Mountains, past the north face of 16,000-foot Mount Sanford, circle half around the base of towering Mount Drum, past the north side of the Great Chugach Range through the Matanuska Valley to Cook's Inlet where the 38-foot tides labor ceaselessly.

Yet another branch for some-

Mother to Know His Fine Record

By the Canadian Press

Whitehorse,

Yukon Territory, Dec. 16
Corporal Otto Gronke, who drove the first truck over the new Alaska Highway, received a unique Christmas present yesterday.

At the Whitehorse Airport saying goodbye to Col. K. B. Busk, Chief of Staff of the Northwest Service Command, Corporal Gronke suddenly was asked:

"You're from Chicago, aren't you?"

"Yes, sir."

"What's your mother's telephone number?" asked the Colonel.

Corporal Gronke told him and the Colonel wrote it in a notebook.

"I have a 30-minute stop-over in Chicago," the officer explained, "and I'm going to spend about 20 minutes of it to phone your mother and tell her what fine work you're doing here."

time advocated by students of Alaska defense transportation needs has now been authorized and work on it begun. It is an extension of the road from the port of Haines on Lynn Canal—the terminal fjord of Southeastern Alaska's "inside passage" to meet the Alcan Highway east of beautiful Kluane Lake. A territorial road now runs from Haines, forty-two miles northwest to the boundary. From here it will be continued northwest over the Chilcat Pass and along the old Dalton Trail—used from prehistoric days by the interior Indians in trading with the coast—past Dezadeash

Lake to meet the Alcan Highway about midway between Whitehorse and Burwash. This will provide an alternative to the all-land route, will permit the use of the protected waters of the "inside passage" to barge supplies from Prince Rupert, Vancouver and Seattle.

THUS will be avoided on the one hand the long transcontinental haul when gasoline and rubber are to be conserved, and likewise the bottleneck of the narrow-gauge White Pass and Yukon Railway extending from Skagway to Whitehorse. The latter route, extensively used in recent months, requires transfer from steamer—or barge—to rail and then to highway. The Haines cutoff will permit supplies unloaded at Haines to travel by truck directly to their destination provided that destination is on the Alcan Highway, or on one of its building or projected branches or extensions. (The Haines cutoff, incidentally, will make pretty close contact between the Alcan Highway and Juneau, the Territorial capital. A road, the Glacier Highway, now runs due north from Juneau twenty-nine miles to Eagle River. This can easily be extended another thirteen miles along Lynn Canal to Berner's Bay. From there a ferry to Haines presents no serious problem.)

These extensions and still others that are clearly desirable, such as a connection between Prince George and the present route via Pine Pass or Monkman Pass so as to render the route accessible to Southern British

Columbia and our Northwest, and still other links between the highway and the lower end of Southeastern Alaska, are bound to transform the Alcan Highway from a road to a highway system.

ALASKA, which has hitherto had little in the way of roads, is of imperial dimensions. Let it not to be forgotten that, counting the Aleutians, Alaska is as wide from east to west as the United States, and as deep from north to south. The expanding requirements of global war cause its defenses—or offenses—to bring its 26,000-mile coast line (as compared with 23,000 of the United States) and to make them front south on the Pacific Ocean, west on the Pacific, Bering Sea and Arctic Ocean, and north on the Arctic. It is clearly desirable that construction extending the highway to Bering Sea be undertaken immediately, and the logic of Alaska's strategy calls for one extension due west to the tip of the Seward Peninsula and for another southwest to the south shore of Bristol Bay and as far down the Alaska Peninsula as possible. Nor is a third branch extending to the Arctic with its oil fields and its possibilities for trans-Polar aviation, beyond the realm of early action.

And so there has come into being, in the course of little more than a sub-Arctic Summer, with its long days and enduring twilight, a road that will powerfully affect the destiny of a continent. The Alcan, which in a few years will be the northern extension of the great Pan-American Highway System, may prove of vital import in winning World War II, and in maintaining the peace in the years thereafter. In the reorganizing and resettling of an upheaved and shattered world, the highway will further the settlement of sparsely populated Alaska and bring back to the territory the boys—many of them there now in uniform—and the girls who want to bring up their children there and call it home. There will be plenty to do in Alaska after the war, for besides all else it will remain what it has just been discovered to be, a bulwark for the Western Hemisphere, which will need our nation's sturdiest sons and daughters. It is notable that the opening of the highway synchronizes with the dawn of appreciation of Alaska's importance in Pacific and world strategy. And it is wholly significant that this route as conceived and executed follows the airway and is essentially auxiliary to it.



Colored soldiers covered themselves with glory by their labor on the Alcan Highway. They trod on the heels of the survey crews in their pioneer work and fought insects, cold, exhaustion and natural obstacles. This group is marching home to dinner.

Trucks Roll on 1,671-Mile Alaska Road; Project Is Built in 6 Months by 12,000 Men

WASHINGTON, Oct. 29—Army trucks traversed the entire length of the Alaska-Canada road known as the Alcan Highway this week, marking completion of this project in a little more than six months, Secretary Stimson said today. The formal opening of the project will probably take place on the Alaskan-Canadian border on Nov. 15.

The Alcan Highway runs for 1,671 miles from Dawson Creek, northwest of Edmonton, Alberta, to Fairbanks, Alaska. It was hewn out of wilderness country by 10,000 soldiers and 2,000 civilian workmen.

Mr. Stimson pointed out that the road was built at the rate of eight miles per day. It involves bridging 200 streams and construction of a roadway twenty-four feet wide. The highest elevation crossed by the road is 4,212 feet.

"Thousands of trucks," Mr. Stimson added, "will run all Winter carrying soldiers and supplies to Alaskan posts. Plans are under way to haul strategic raw materials southward on the return trips."

The bridges are of timber construction and will go out when river ice starts moving in April. However, other bridges will be waiting, ready cut, with the machinery to set them up, on every river bank, and detachments of engineers stationed along the route will put them up immediately."

Arrangements have been made by the Army for construction of rest camps for the operators of truck convoys, barracks for engineer maintenance troops, and weather observation and telephone installations to serve the whole highway. Facilities, equipment and supplies to service the road are being provided.

The construction of the highway through the wilderness in such a short time constitutes an engineering feat of first magnitude. Aside from the endurance and efficiency of the construction force, among a large detachment of Negro troops attained special distinction, three main factors contributed to the speed.

Construction was begun at various points at the same time by transporting crews and equipment to strategic locations in March, before the spring break-up of ice and snow made trails and rivers impassable.

Aerial surveys were employed, followed by stereoscopic analysis of aerial photographs and the time-tested and traditional engineer method of ground reconnaissance on foot, with pack-horse and dog-train.

Bulldozers, tractors and other types of heavy equipment helped set the speed record. The primary road was actually established by the powerful bulldozers, which plowed through the forests of native spruce, jackpine and aspen as if through cornfields, uprooting and pushing trees laterally off a 100-foot cut, leaving the work of clearing to be handled by relatively small forces of men.

From 35 Below to 90 Above Zero

Timbers for the construction of bridges, trestles and other structures were felled by the troops and

processed by sawmills on the site. Ferries for crossing the many turbulent creeks and streams were improvised of rafts and pontoons. At one major crossing a large scow was built from forest lumber capable of transporting equipment weighing forty tons.

During March the troops battled bitter winds and temperatures as low as 35 degrees below zero, when it was impossible to drive a tent-peg into the frozen ground. During July and August they sweated in a heat of more than 90 degrees, and were forced to wear gloves and net helmets to protect themselves from the swarms of mosquitoes, flies and insect pests. In wet weather they slogged through bottomless mud; in dry weather portions of the road were shrouded in clouds of alluvial dust so fine that no mesh could exclude it.

Through it all, according to official reports, the morale of the men remained high.

Under agreement between the United States and Canada, the highway was undertaken by the Army engineers as a military project. On Sept. 10 the War Department announced creation of the Northwest Service Command, with headquarters at Whitehorse, to handle Army highway and railroad construction and all supply services in Western Canada and Alaska. The new command is headed by Brig. Gen. James A. O'Connor, previously in charge of construction on the southern section of the highway.

ALASKA ROAD CREW ANNOYED AT BEARS

They're Sidewalk Superintendents, Says a Contractor

LOGAN, Iowa, Sept. 13 (UP)—P. K. Duvall, road building contractor home from Alaska for a vacation, complained tonight that the men building the military highway through the Northern wilderness were becoming bored with friendly bears and dispirited fish.

"The darned bears are more annoying than sidewalk superintendents watching an excavation for a new city hall," Mr. Duvall said. "They come up to sniff at the machinery and we have to stop work to shoot them back into the woods. The bears, the caribou, the partridges and even the fish aren't afraid of us. They haven't seen men before. Some of that country hasn't even been explored by the Indians."

"I remember one old, large mangy bear," he went on, "who picked up a box of dynamite between his paws, then wanted to wrestle with the man who tried to take it away from him. He wouldn't put it down until a drove of mosquitoes came along and forced men and bears alike to cover."

"If I told you how big those mosquitoes are you wouldn't believe it, so I'll tell you about the fish. The boys were crazy about fishing at first, but now they consider it a joke. You can put a strip of white cloth on a hook and catch a thirty-pound salmon."



Army vehicles, loaded with vital war supplies, starting northward on the wilderness route.

Army Reveals Secret Highway Link in Alaska

PORTEGE, Alaska, Nov. 22 (AP)—

With the vital Alaska railroad cut-off tunnel just broken through and the strategic Alcan Highway officially opened, Alaskan army authorities have permitted the announcement of still a third important transportation link in the territory.

The hitherto secret Glenn Highway from Anchorage to the Richardson Highway, via Palmer, opens a previously impassable route between the Chugach and Talkeetna mountains. Cutting through high passes and over swamps, it gives Anchorage its first connection with the interior aside from the Alaska Railway.

The highway was built in secret and has been in operation for some time. It is known locally as the Chickaloon Highway.

Tunnel crews working from both ends of the 13,000-foot Alaska Railway bore met in the middle almost directly under the center of the glacier-covered mountain. The bore will cut sixty miles from the haul necessary to get supplies from the seacoast to the interior, through elimination of the twisting roadbed which frequently caused serious trouble in winter.

Major Gen. S. B. Buckner, commander of all troops in Alaska, pulled the switch which set off the final blasts beneath the mountain and asserted as he did so that the tunnel would prevent the enemy "from knocking out the most important piece of transportation in Alaska."

Speakers said the tunnel was the fourth longest in the country and noted that the construction crews driving from both ends had missed a "perfect" connection by a mere half inch in elevation and an eighth of an inch in line.

The tunnel was started Nov. 19, 1941, and was completed weeks ahead of schedule. The cost was estimated at \$530,000.

Colonel O. F. Ohlson, general manager of the Alaska Railway, estimated that the tunnel would bring about a 30 per cent decrease in freight rates to Anchorage and a cut of between 7 and 8 per cent for the Fairbanks end of the line.

Railroad to Alaska Surveyed

WASHINGTON, Dec. 10 (AP)—Survey of a proposed trans-Canadian railroad to Alaska to supplement the Alcan Highway has been completed, the War Department announced today, but the line will not be built at present. The survey was made by Army engineers with the cooperation of the Canadian Government.

"The War Department does not consider that a military necessity exists for its construction at the present time," said the announcement. "Details of the survey have been filed for possible future wartime use."

TRUCKS ROLL NORTH ON ALASKA HIGHWAY

Ceremony in Yukon Wilderness Ends With Cutting of Ribbons to Let Them Pass

KLUANE LAKE, Yukon Territory, Nov. 21.—The wilderness route to Alaska is open today, seven months and seventeen days after building of the 1,600-mile road began.

In the presence of a small group of Army officers and government officials gathered yesterday on the bleak slopes of Soldier's Summit overlooking the frozen lake below, Ian MacKenzie of the Canadian Cabinet and E. L. Bartlett, Secretary of State of Alaska, cut a red, white and blue ribbon, formally opening the Alcan International Highway.

As the first link link was completed between the United States and its great territory in the north, a thin snow swept down from the St. Elias Range, heaped in lonely grandeur to the west. Despite huge bonfires the 250 witnesses, including Grover Whalen of New York, stamped their feet to keep warm in the sub-zero temperature.

Brig. Gen. James A. O'Connor, commanding the Northwest Service Command, Mr. Mackenzie, Mr. Bartlett and others acclaimed the highway an epic pioneering achievement significant not only as a present vital military link with the continental bastions of Alaska but also as a future pathway opening a new frontier.

Passage of First Through Truck

The exercise began at 9:30 in the morning just as a gray Arctic dawn was breaking. Colonel K. B. Bush, chief of staff of the Northwest Service command, was master of ceremonies.

A military band played martial airs and a column of Royal Canadian Mounted Police, led by Inspector William Grennan of Dawson, command the Yukon force, lent color to the scene.

As the ribbon was cut, a ton-and-a-half truck, which had made the trip from Dawson Creek, the road's southern terminus, to White Horse in seventy-one hours, led a line of freight trucks past the barrier along the lonely stretch towards Fairbanks.

The first truck to make the complete run was driven by Corporal Otto Gronke of Chicago and Private Bob Bowe of Minneapolis. The muffled applause of gloved hands broke the Arctic silence as they stepped into first gear and moved northward.

Messages of congratulation were read from Vice President Wallace,



Four American enlisted men and four Canadian "mounties" standing at attention before the tape was cut signifying the official dedication of the new 1,600-mile roadway. The ceremony was held at Whitehorse, Yukon Territory when the temperature was 15° below zero.

Governor Ernest Gruening and Delegate Anthony J. Dimond of Alaska, Secretary of War Stimson, Lieut. Gen. Brehon Somervell, Premier William Aberhard of Alberta and Premier John Hart of British Columbia.

Mr. Wallace predicted that the road would be part of an eventual highway serving the New World from Southern South America to Siberia. Governor Gruening urged its extension to the Bering Sea and Mr. Dimond hailed it as a coordination of intelligence, energy and persevering labor.

Many speakers said that the road was a swift route to our Allies in China and Russia.

The scissors used to cut the ribbon were gold engraved, and Colonel Bush announced that they would be broken apart, with one blade going to President Roosevelt and the other to Prime Minister Mackenzie King.

The absence most marked was that of Brig. Gen. William Hoge, who first began the building of the road from White Horse last Spring and is now on active assignment elsewhere.

General O'Connor, short and stocky, declared in response to the presentation of a service flag from the Alaskan chapter of the Daughters of the American Revolution, that the road was a bond between the United States, Canada and Alaska, and that it had a future significance which no one could now fully estimate.

He praised the all-out spirit of the soldiers and civilians who built

LAST LINK COMPLETED IN ALASKAN HIGHWAY

North and South Crews Meet Head-On in Yukon Forest

WHITEHORSE, Yukon Territory, Canada, Nov. 4—Although the new Alaskan highway linking the United States with Alaska has

been in use some time, the final link was not completed until the North and South crews met head-on in the spruce forests of the Yukon Territory yesterday.

The meeting was dramatic. Corporal Refines Sims Jr., a Negro from Philadelphia, was driving south with a bulldozer when he saw trees starting to topple over on him. Slamming his big vehicle into reverse, he backed out just as another bulldozer, driven by Private Alfred Jalufka of Kennedy, Texas, broke through the underbrush. Jalufka had been forcing his bulldozer through the brush with such speed that his face was bloody from scratches of overhanging branches and limbs.

"I never saw anything so exciting and so filled with history," said Harold W. Richardson of Chicago, Western editor of The Engineering News, when the big bulldozer broke through. He and two Army officers, Lieutenant Ralph W. Hunt and Lieutenant G. H. Jones, were standing near by and witnessed the meeting.

Immediately after this Yukon version of driving the golden spike, Sims and Jalufka turned their bulldozers around and began widening the opening.

The meeting occurred just twenty miles east of the Alaska-Yukon international boundary at Beaver Creek. Formal dedication ceremonies will take place Nov. 20, with high ranking military and civil officials of the United States and Canada in attendance.

Atka People Have New Homes

Basket Weavers Evacuated From Aleutians Settle At Killisnoo, Indian Village in Alaska

By FERGUS HOFFMAN

KILLISNOO, Alaska—Here, in the tumbledown shacks of this sleepy Indian village, once razed by the thundering guns of an American warship, a handful of peaceful Aleut basket weavers has found a secure and quiet haven more than 1,500 miles from their ancestral home on Atka Island, far to the curving west in the embattled Aleutians.

Bewildered and shocked by the onslaught of warfare which struck the foggy waters of their homeland in early June, the eighty men, women and children from Atka can do little but stand and watch as Indian Service workers hurry to complete temporary living quarters for them on this sheltered cove on Admiralty Island, in Southeastern Alaska. This is a new land, and to people who never had seen a tree before, the dark, towering forest of spruce and cedar which borders the Killisnoo clearing is a mysterious and forbidding place. They will not venture into the forest, where the undergrowth snarls in thick masses of devils'-club thickets and moss-covered windfalls.

"We cannot leave the village to hunt," one oldster, nearly blind from years of weaving the fine, yellow Atka beach grasses into exquisite baskets, complained. "The sticks-with-grass get in our way."

Claude Hirst, director of the Office of Indian Affairs in Alaska, feels certain that the Atka refugees soon will become accustomed to their new way of life. Well supplied with food, clothing and medicine, guarded against disease by two government nurses and a physician, they are being settled for a duration stay on this island beside Alaska's Inland Passage.

A Marked Transition

But homesickness is an illness for which nurses and physicians have no cure. The perplexed, lonely look on the faces of these childlike natives is mute testimony to the nostalgia which shadows their every thought. Not only do they miss their customary summer pursuits of grass gathering, weaving and fox hunting, but they miss the entire atmosphere of the island which was home to them.

The Aleuts, who cannot quite comprehend why they suddenly were ordered aboard a government troopship and transported to Killisnoo, are having a difficult

time adjusting themselves to the change. Peaceful, submissive, industrious and religious, they are still the people whose ancestors preferred slavery under the early Russian explorers and fur traders to the loss of their Atka homes.

They offer a decided contrast to the fierce, independent Tlingit Indians whose former homes they now occupy. Here, where not even a trace remains of the great log "bear fort" from which Killisnoo derives its native name, the Tlingits threatened insurrection in 1882 and the United States cutter Corwin blasted their village to bits.

But the Atka people are not a warlike people. Their fate at the hands of the invading Japs would

have been certain death. Their future here is one with the future of the white man in the Western Hemisphere. But that is hard to explain to a people who have no comprehension of a world that is anything but misty and bare and far from things like "sticks-with-grass."

Farther north on this same island, fifty miles from Juneau, there are other native refugees—the 400-odd former inhabitants of the Pribilof Islands, some 200 miles north of Dutch Harbor. They are the Aleuts who each Summer helped with the annual slaughter of the great Alaska seal herds on St. George and St. Paul, the two main islands of the Pribilof group.

This Summer, however, there was no seal hunting in the Pribilofs, where American bombers and warships still wage a deadly game of hide-and-seek with the Japanese. Instead, like the people of Atka, the Pribilof population was evacuated to Southeastern Alaska.

At first, in the brilliant Panhandle sunshine, the Pribilovians suffered from heat prostration.

The temperature rarely rises above 64 degrees on the murky Pribilofs; here, temperatures of 78 and 80 degrees are frequent in Summer. The captain of a Bureau of Fisheries supply ship which brought food and equipment here said the sound of the natives' sneezing and coughing on a warm day recently was "like a herd of seals barking in mating season." Indian service nurses worked unceasingly to care for the ill, whose temperatures rose to 102 and 103 degrees. But a short rainy spell restored them all to normal health and now the former seal hunters are learning to fish for the large halibut which abound in these waters. A holiday was declared recently when one of the refugees brought in a 200-pound halibut and the entire village feasted.

Alaska Schools Open to All

The Territory of Alaska's school system is composed of seventy-two schools and the University of Alaska. While the school system is maintained principally for white children, native Eskimos, Indians, and Aleuts are not barred and many are enrolled.

Geodetic Surveys Great Help in Aleutians

The Christian Science Monitor

SEATTLE, Wash.—Successful action in the Aleutian Islands must depend largely upon an accurate knowledge of the winds and tides and weather complexities that prevail and the marine equipment to navigate successfully in spite of them. The Navy and Merchant Marine operating there today depend greatly upon findings made previously by the Coast and Geodetic Survey.

When Commander A. M. Sobieralski, Supervisor, U. S. Coast and Geodetic Survey, spoke recently before the Community Council here, like a skillful mariner, he piloted his audience around among the Islands without once revealing a military secret or predicting what might happen. But he did tell enough about tide-rips and the north wind and ocean depths to convince them that occupation of the Aleutians depends largely upon knowing how to deal with these phenomena.

Eight years before Pearl Harbor the Survey was making surveys in Aleutian waters. Not until recent years, however, were funds provided for more extensive work with as many as five vessels operating in Alaskan waters during the five months when the necessary observations, triangulations and soundings are possible.

Moved Mountains

In their work among the Islands the Survey have sometimes moved islands seven and eight miles from their location on the old inaccurate charts. In fact, they have moved mountains, the Aleutians being the tops of extinct submarine volcanoes. Until the Survey began its work the only knowledge was

based upon old Russian charts or the hearsay opinions of mariners of which each had a different one.

That "the Japanese know more about the Aleutian waters than we do," a loose observation often made, is refuted in the painstaking survey made by the U. S. Survey. Commander Sobieralski admits that they undoubtedly made observations and some reconnaissance from their ships but not the careful and detailed surveying necessary to a more than a superficial knowledge of these difficult waters. Their present encampments, he points out, are in locations exposed to the pitiless north winds, whereas all other settlements on the Islands are in sheltered locations.

Commander Sobieralski does not spend much time in reviewing what has been accomplished, he is so intent upon telling what needs to be done. The problem in the Aleutians is dealing with the "unpredictable." Every mariner in speaking of these Islands uses the word.

It is not because these Islands are in a cold, Arctic belt that they are described as bleak and wind-driven and fog bound. The climate is not much colder than it is in Seattle or Vancouver, B. C. It is because the chain of Islands is a dividing line between Arctic conditions and the warm Pacific. North of the Islands is the icy Bering Sea. The Pribilof Islands, only 200 miles to the north, are in Arctic weather conditions. South of the Islands it is warm. Naturally this makes for heavy and constant fogs.

The Aleutians too are a combat zone for the winds. When the north wind comes bearing down and meets other winds roaring in there is conflict. Tides are different too. North of the Islands they are

diurnal, or once daily, while on the south there are two tides a day. When these conflicting tides meet, say in the important Unimak Pass, they form tide-rips that amount to rapids and when opposite winds blow up, a condition occurs which causes even large boats to behave like toothpicks.

Observations, the very foundation of geodetic surveys, are just about impossible under such conditions. In locations where boats should remain for at least 10 days to make reliable observations, even large boats drag anchor.

But there are modern methods for handling even the unpredictable and unmanageable. Radio stations, where lights from lighthouses would never pierce through the fog, can be located so that their beams may guide the ship equipped with a radio direction finder.

Circle Route

"After the war is over" and trade routes are once more opened with the Orient, the matter of perfecting navigation by way of the Circle Route is bound to come up again. This has been a big objective of Aleutian surveys. Ships from Los Angeles and San Francisco as well as those from Seattle and Vancouver steer toward the Aleutians on their way to the Orient, following the curve of the earth rather than what looks like a straight course on a flat map.

When ships reach Dutch Harbor the "Circle" leads through Unimak Pass and travels north of the Islands, not only saving 100 miles but avoiding head winds at certain seasons. Friendly routes across the Pacific will depend largely upon the fact finding of the U. S. Coast and Geodetic Survey in Aleutian waters.

WOLVES DEPLETE ALASKAN REINDEER

**Two-thirds of Emergency
Food Supply of Eskimos
Destroyed in Decade**

NOME, Alaska, Dec. 12 (AP)—Wolves are threatening the winter food supply of the Alaskan Arctic.

In less than ten years the wolves have reduced reindeer herds of Alaskan Eskimos from 550,000 animals to 170,000, or more than two-thirds, and are still slashing at the forty-five reindeer herds forming this region's one food supply in event of isolation or invasion.

J. Sidney Rood, director of the United States Reindeer Service at Nome, holds the wolves "solely responsible for the depletion of the reindeer."

"This they have accomplished by two methods," he said, "direct attacks on the herds and constant pursuit so that they are driven away from their food supply and starve."

Some attempts to cut the wolf menace are under way, with debatable success. It is difficult to induce a native to go trapping with only the promise of bounties, \$20 a pelt, when he can obtain work at high wages in almost any Alaska town.

Mr. Rood believes that the only answer is the employment of government airplanes flying at altitudes low enough to permit shooting of the wolves from the planes. One such plane, operating only in the pilot's spare time, accounted for thirty wolves last Spring in a comparatively small area.

The reindeer herds are both government-owned and privately owned by Alaska natives, mostly Eskimos, who are employed as herders. This herding, with other administrative expenses, cost the government \$91,000 last year, when, incidentally, the herds decreased by 31,000 animals.

The threat to the reindeer became of paramount importance to this area with the declaration of war. Reindeer meat always has been a winter staple for such towns as Nome, Kotzebue, Teller, Wainwright and Point Barrow, all inaccessible by ship during the winter. With the influx of war workers the demand was greatly increased.

Should the territory be cut off for any reason from the continental United States, reindeer meat might be the only food supply for these civilians and for any Army units in this part of Alaska. Just for normal needs, the Army this year ordered more than 100,000 pounds of reindeer to supplement other meat supplies.

Alaskan Jade Still Intact

Traditions of rich jade deposits in Northern Alaska exist, but arctic conditions have prevented their discovery, reports The Associated Press.



Normally street lights burn in stores at Fairbanks, Alaska, all day during short winter days when the sun hangs close to the horizon.

Aleutians: Weather Vane

U.S. Conditions A Week Ahead Forecast for Foe

Rainy, Fog-Bound Islands Form a Weather Factory Affecting the Continent

By John J. O'Neill

The tip of the Aleutian Islands, where the Japanese have established themselves on Attu and two near-by islands, is one of the world's weather factories. Here is one of the principal spots where the weather affecting the United States is created. Weather conditions originating at Attu will, about a week later, be transmitted to Chicago and New York, and thence over the ocean toward England.

The Japanese have gained a military advantage in advance knowledge of the general weather conditions for the continental United States, though our own forces still have the same facilities available to them at observation stations on many other islands of the great 2,000-mile chains.

Much has been written about the unpleasant weather over the western tip of the Aleutian chain. There is plenty of reason for calling it unpleasant; that really is a polite term for conditions there. Scientists of the Smithsonian Institution of Washington who made an extensive study of this area describe its climate as "rigorous."

The average summer temperature at Attu is 50 degrees Fahrenheit, and the warmest it ever gets there is about 66 degrees. Winter temperatures never drop very low, and average about 12 degrees above zero.

Rain and the humidity are the greatest causes of complaint. Attu is one of the rainiest spots on earth; it has up to 250 rainy days a year,

and when there isn't rain there is fog. Records of recent years show as few as eight wholly clear days in a year. The humidity is constant and high, averaging 90 per cent the year round.

Worse in the Mountains

These are the lowland conditions, and, bad as they are, they are better than conditions in the mountains, where fog, rain and cold increase with elevation.

Under such conditions there is little chance for vegetation to grow. There is not a tree of any kind on the western islands, even as far east as Dutch Harbor, and other kinds of plants are limited in number and size. As human habitations Attu and its neighboring islands are distinctly not attractive—just rocky barren waste, tolerable for occupation only as a military necessity.

The whole Aleutian chain is little more than a series of mountain peaks sticking out of the ocean. Bordering them on the south is a great hollow in the ocean known as the Aleutian Deep. If the ocean were withdrawn from that area the Aleutian Mountains would tower about 23,000 feet above the bottom of this deep valley. These "deeps" are very common around the rim of the Pacific. One of them, the Tuscarora Deep, lies in front of the Japanese archipelago.

To the north of the Aleutians the ocean is very shallow, averaging less than 1,000 feet deep over a broad area extending far north of Bering Strait. In a geological sense the Aleutians are very young. New islands constantly are appearing in the chain, and frequently disappear as suddenly as they came.

Formation of the Aleutian Mountain chain probably took place about the time of a general subsidence of the land to the north. A rise of 500 feet, throughout that area would create a strip of land almost 1,000 miles wide joining the mainland of Alaska and Siberia. A rise of about 1,000 feet would provide a land area as far south as the Aleutians.

Warm and Cold Currents

It is this geological structure that is largely responsible for the bad

weather in the neighborhood of Attu. To the south of the Aleutians flows the warm Japanese current, a broad river through the Pacific Ocean. To the north is the cold water from the Arctic Ocean coming down through Bering Strait.

For a home demonstration of what these conditions will produce, open the door of an electric refrigerator on a hot, humid day. When the door is opened a cloud of vapor seems to flow out. This cloud is created when the cold, relatively dry air of the refrigerator comes in contact with the warm, moist air of the room. The cloud is made up of microscopic rain drops. At the Aleutians the cold air over the water from the Arctic comes in contact with the warm, moist air over the Japanese current, and hence the almost continuous rain.

The Arctic is the great weather breeder of the Northern Hemisphere. A widespread area of high barometric pressure exists over the polar regions the year round. This mass of cold air increases in extent during the winter, and some of it starts spinning southward and eastward, bringing cold waves to the United States.

Brings Rain or Snow

As the peak of the winter passes, the polar air mass disintegrates until the atmospheric pole cap is reduced to its summer dimensions.

When these cold air masses leave the pole they extend high in the atmosphere, and as they travel southward they flatten and spread out, wedging themselves under the lighter warm air masses they encounter. When this happens we have a repetition on a grand scale of the conditions following the opening of the door of the refrigerator. Widespread rain or snow results.

These air masses flow out of the Arctic at many points, but those that swirl through the Alaskan area are the ones that swing across the United States. A few come down through central Canada. There was a succession of cold waves in Europe last year, which indicated a flow of cold air masses from north of European Russia.

The weather in the United States this year has been on the average about two degrees warmer than normal, which may be an indication that the polar cap is still tilted in the direction of Russia.

Archeologist Writes of Life on Lonely Aleutian Island of Attu

Wonders How Chief Mike, Maggie 'Rock of Ages', and Others of Friendly Aleuts Have Fared; Outpost's Total Population 41

The following article is reprinted from the October issue of "Natural History," publication of the American Museum of Natural History, by special arrangement with author and publisher.

By Alan G. May

My former "home" on Attu is now occupied by the Japs or else it has surely been obliterated by our bombers. It is not a matter of great consequence, but I am concerned about the treatment my native friends will receive at the hands of the Jap invaders.

When I arrived in the village of Attu in 1936 the problem of where to live for the duration of my stay was immediately solved by the little chief who suggested that I move into the schoolhouse. This was by far the largest building on the island and I was astounded to find it contained two schoolrooms, two bedrooms, two kitchens and, strangest of all, a modern bathroom complete with fixtures. One bedroom I found furnished with all the necessities except blankets, and one kitchen was completely furnished even down to crockery and kitchen utensils. I learned later that there had never been a school teacher on the island and that the natives did not want one. Anyway there were only four or five children of school age.

I had come out with a party to make archeological investigations under the leadership of Dr. Ales Hrdlicka, of the Smithsonian Institution, and while he and the others were excavating on Kiska I had been permitted to go on farther west to work on Attu. Here I was

left by the Coast Guard cutter *Shoshone*, the lone white man on the island. It was possible for our party to reach these inaccessible islands only through the fine co-operation of the Coast Guard.

I found that many of the natives knew no English; four or five of them knew an odd word or two. The chief, however, spoke broken English exceedingly fast—so fast that I found it hard to understand him at first; but later I was able to carry on long conversations with him, and he indeed proved himself a friend in need.

Attu is the most westerly of the rocky, treeless Aleutian Islands and has the distinction of being the only inhabited Alaskan island in the Eastern Hemisphere. It is approximately thirty by forty miles in size, indented by many inlets and bays. The offshore reefs are numerous, and continual fogs envelop the island, making navigation extremely hazardous. Gales are frequent.

A Narrow Entrance

The only safe anchorage is in Chichagof Harbor, and even this bay has a dangerously narrow entrance, with reefs stretching across one-third of the opening. Here, at the nearest point, a rock could be thrown from the deck to the shore on either side.

The inhabitants of this little community of forty-one men, women and children are all Aleuts of mixed blood. It is doubtful if any pure-blooded Aleuts still exist.

One evening, after I had been on the island several days, I had my first callers. They were Ivan and Fadé (pronounced Fay-de-say) Hodikoff, both nephews of the chief. Their combined knowledge of English was about equal to my knowledge of Aleutian, which was exactly six words. I offered them chairs, and there we sat smiling at each other. Nothing happened. I found the situation rather absurd. If we could not converse, then at least we could eat, so I brought out some crackers and made a pot of tea. This consumed, they pulled some archeological specimens from their pockets and presented them to me—evidently the object of their visit. In pantomime I thanked them profusely, but still they did not go! When I finally awoke to my obligation and presented each of them with a can of pork and beans they grinned broadly and, jabbering happily, departed almost at once.

The village is in charge of the chief, who is elected by the natives each year. The present chief, Michael Gorga Hodikoff, has held his position for the last several years owing to the successful handling of the affairs of the village. The chief is assisted by a second chief, Age-fangel Prokopiof, the tallest man in the village. Both men are capable as well as industrious and carry on in a most efficient manner.

Several times I had met the chief's wife, Anastasia, a large, good-natured woman, and she had always smiled or waved without uttering a word, so I presumed she knew no English. One day she came out with Mike to where I was working and, walking up to me, she surprised me by saying, "Ullo, my frien'."

Anastasia is one of the two or three women who can still make the famous Attu baskets, which are known throughout the world to collectors and museums. This age-old craft is a very slow, tedious procedure and will soon become a lost art. It requires many months to cure the grasses and complete a basket.

The best of the basket makers is Maggie Prokopiof, who is familiarly known to the Coast Guard service as "Rock of Ages." She does not know how old she is, but in her time she was acknowledged to be the best of the Aleutian dancers. Since dancing seems to have been at one time an important custom, it is surprising to find no musical instruments of any kind on the island except the phonograph. Unfortunately today the real old-time dances are almost forgotten, the natives preferring modern dancing.

Chief Mike and Anastasia called on me one night, and in the course of the conversation I asked Mike if he had heard that King George V of England had died. "No," he said, "Fine ol' man." Then he went out and returned with a colored print of the Czar and his family to show me.

One-Man Radio Station

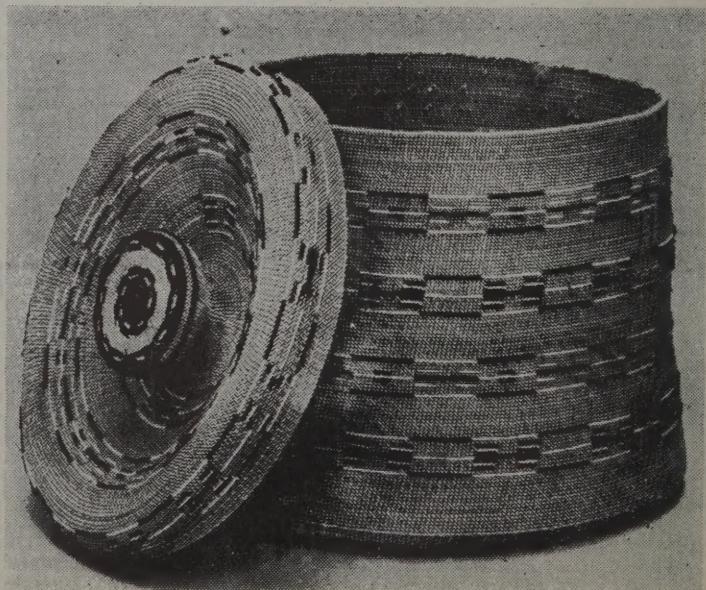
Mike invited me to hear him broadcast, having been taught by the Coast Guard to use the radiophone. He is naturally proud of this accomplishment, always reporting the weather and anything else of importance that may have happened. Commencing at 8 o'clock each night, Mike starts with, "Ello, lo, lo! This KAJU calling KEAW, Umnak, Alaska." This he repeats three or four times. "If you hear this you let me know. This is KAJU, Mike speaking, if you listen you let me have answer okay eight bells." This he says so fast that the first time I heard it I wondered if he was talking Aleutian or English.

Another evening I was invited to Mike's house and found six people there for a tea party. Anastasia served the tea and ship biscuits. It is customary for the natives in their own homes to pour the tea into their saucers, pull the saucer to the edge of the table, and then bend the head down to the saucer to drink. They never did this, however, when they called on me.

No white men live on the island,



Little church where Attu's chief conducted services. Building may have been leveled when United States bombers devastated the island after Japanese invasion.



American Museum of Natural History

and although an American has the trading privileges, he pays only a visit of a week or two to the village each year. The trader can supply the natives with all the staples and other necessities they need. When he is away, the chief takes charge of the store. This store, in many ways, is an asset to the natives, but it also has some disadvantages, for the younger natives are no longer learning the crafts of the older people. Not many years ago the natives all made their own mukluks (waterproof skin boots) but today only a few make them, and not many pairs are seen in use. The kamlaykas (waterproof coats made from the intestines of the seal) are no longer made. It is easier for the inhabitants to purchase rubber hip boots and slickers, which are no more efficient, than to make them in the old way.

Thirty-five miles east of Attu is the island of Agattu. The natives go back and forth between the two islands in small dories with outboard motors. Why no lives have been lost on these trips is surprising, but, it is probably due to the uncanny accuracy these people show in prognosticating the weather.

The trapping of the Aleutian blue fox during December and January is the only activity from which the Attuans derive any income. Agattu and Attu are trapped in alternate years. The trapping is a community proposition, the number of pelts being divided in proportion to the size of the families and their dependents. It is interesting to note that the church is considered as one unit of the community, and as such receives its pro rata share of the pelts.

Fish, which are caught with seine and gill nets, are also divided among the inhabitants. This community spirit in the same manner extends to the killing of sea lions. All sea lions killed are common property; the successful hunter, however, has the first choice of any part of the animal he desires.

Several times the chief sent me some trout, and one occasion gave me some sea lion meat. He told me to boil the meat for an hour or two, but the smell when cooking nearly drove me from the building. Hot, the meat was very greasy and of a nauseating flavor, but when cold, with the grease skinned off, it was quite palatable and tender. The cooked meat is almost black and flakes into long, thin strips like leather shoe laces.

The Russian Greek Orthodox Church, situated at one end of the village, is an excellent building for such a small community. As there is no resident priest, the chief leads the church services. Many interesting icons and colored religious pictures decorate the walls. On the doors leading to the sacristy are two old Russian oil paintings, and in the sacristy are many ancient religious books brought from Russia many years ago. In the belfry there is a decorated bronze bell, originally from Russia; but, for some unknown reason, this has been discarded for an American locomotive bell.

The majority of the natives now live in small frame houses, but a few still live in barabaras, the old type semi-subterranean earth houses. The barabaras that now remain in use have been modernized by board walls and floors, stove pipe chimneys and windows.

These natives are a hard-working people and are not often found idle. After the winter months have passed they proceed to the business of catching fish, often going to distant parts of the island and establishing

Fear Felt for American Couple And Native 'Army' on Attu

By the Associated Press.

SEATTLE, Aug. 8.—Don Pickard and his wife, Ginger, former boat operators between Dutch Harbor and Attu, are wondering what happened to their friend, C. Foster Jones, and his 47-man native "army" on Attu when the Japs invaded that Aleutian Island outpost.

Mr. Pickard said that Mr. Jones, island caretaker and operator of its radio station, drilled the men among the natives as a little military force during the Pickards' last visit to the island in April.

Jones had a rifle and a shotgun in his radio station. He told the Pickards he and his army were going to fight it out with the Japs if they landed.

"He showed me how he could ruin the whole radio so it would be useless to the Japs," Mr. Pickard said.

"If they landed he was going to destroy the stores of aviation gasoline and Diesel oil."

Mr. Pickard added that "he had a lot of courage but I kind of hope that, when he saw it was hopeless, he didn't fight. If he did, he's probably dead."

Mr. Pickard said that Mr. Jones had four schedules a day of broadcasting aerological reports to Dutch Harbor. "We heard him one noon as usual. Then we never heard him again."

Mr. Jones and his wife, Etta, the school teacher, were the only whites on the island.

The Pickards could have evacuated the whole population from the island in April but had no orders to do so, they said. A Navy vessel later tried to get in to pick up the populace but was held off by storms. By the time these had abated it was too late.

Temporary camps for this purpose. They travel many miles in their outboard dories to bring back driftwood for use as fuel in winter. Driftwood is not very plentiful and must be supplemented by coal from the store.

At certain seasons of the year the hunt seals, sea lions, birds and eggs. Nothing is ever wasted; bent nails from packing cases are carefully saved; the skins, intestines and stomachs of the sea mammals are used in various ways. Even the sea lion's whiskers are used for toothpicks and salmon heads are strung up to dry and eventually used for kindling fires.

Sometimes the children tame young sea gulls and cormorants as pets, for there are no dogs and cats on the island. After reaching maturity these birds always forage for themselves, but return to their owner's home each evening.

No agricultural products are grown, for the natives state that the growing season is too short. However, vegetables are raised with some success on Bering Island, one of the Komandorskie Islands, 200 miles to the west, so it appears from this statement that the reason is a lack of ambition rather than fact.

Rare Contacts With World

A ship of the United States Biological Survey or of the Bureau of Fisheries may occasionally make a call at the island. These visits and especially those of the Coast Guard cutters are the high lights of the summer season. When a ship is sighted the chief immediately raises the Stars and Stripes on the tall flagpole imported especially for this purpose.

If the ship is a Coast Guard cutter, Mike dresses in his best clothes—a blue serge business suit with shirt and tie to match—and goes aboard to report on the affairs of the village. He takes with him a list of the persons needing medical or dental aid. When the doctor and dentist arrive in the village, the chief sees that all patients are ready and waiting and makes himself definitely useful in many ways to the officers of the cutter.

The Coast Guard is the mother and the father of natives in the many remote, out-of-the-way villages of Alaska. On these men and their fine ships the natives depend for their meager contacts with the outside world, as well as for their

medical and dental care. When a Coast Guard cutter anchors in the bay for the night the whole village is invited aboard to see the movie show. They go out in their dories, all dressed up in their best for this occasion, and although not understanding the movie, they laugh uproariously in the most inappropriate places.

Generally speaking, the health of the inhabitants is good, there being only two or three of the older men unable to do their share of the work. One bedridden old man, reported to be 104 years old, is conscientiously cared for by Chief Mike in his own home. Mike allows no liquor on the island. This, I think, is one of the reasons why Attu is the best of all the Aleutian villages.

People Still Unspoiled

In the last few years the ways of the white man have made considerable inroads into their way of living, but they remain an unspoiled and likeable people.

Their greatest fear was of the Japanese. All the natives of Attu seemed to have this dread, and they told a story of some of their men going out in two bidarkas (two-place kayaks) twenty-five years ago and never returning. Nothing was ever seen of the men or the bidarkas again, and although it would seem that there might be other explanations for their disappearance, every native on Attu is convinced that they were captured or killed by the Japs.

When I read of the Japanese invasion of Attu I wondered, What did Mike do? Did he run up the American flag when he sighted their ships? Were the natives alone on the island? Did Mike dash to his radio and perhaps, even faster than usual, tell Umnak what was happening? Or were they too terror-stricken to do anything but hide in the hills? Most of all, I should like to know what has happened to my friends there.—to Mike and Anastasia, to Agefangel, Maggie "Rock of Ages," and the rest. I hope that they are safe, but I'm sure that they are not as placid and contented as they were when I knew them.

Alaskan Peat Prospective Fuel

Prospective sources of fuel are the extensive peat beds of Alaska's national forests, according to The Associated Press.

ORIGIN OF ALEUTS, LOYAL AMERICANS, LOST IN ANTIQUITY

Natives of Fog-Bound Alaskan Islands Show Traces of Indian, Eskimo Stock

WASHINGTON, July 10.—The natives of the desolate, fog-bound Aleutian Islands are among the least known of Uncle Sam's people.

They are not, strictly speaking, Eskimos or Indians, although they show unmistakable signs of relationship to both these stocks, say anthropologists of the Smithsonian Institute. Only during the past two decades has much scientific study been devoted to their origins or to the history of their bleak habitat before the discovery by Vitus Bering in 1741.

At the time of Bering there were about 15,000 inhabitants of the desolate chain of islands, their numbers being gradually reduced to below 3000.

The government of the Czars at the start of the 19th Century enacted protective laws. The apostle to the Aleuts was a Russian priest named Veniaminoff, who must be considered one of the great missionaries of history. He went to the islands in 1824. A man of enormous zeal and energy, he was very successful in Christianizing the aborigines.

By and large, the Aleut has responded well to civilization, especially under American rule, which has been progressive and kindly.

There have been many rumors of efforts of Japanese sealers and fishermen to corrupt him by bribery, especially with whisky. But probably there are few more loyal Americans than these islanders, who have learned to be grateful for the paternal kindness of Uncle Sam.

1000 Civilians Leave Aleutians and Pribilof

WASHINGTON, July 6 (UP)—Nearly 1000 civilians have been evacuated from the Aleutian Islands, west of Dutch Harbor, and from the Pribilof Islands, north of the Aleutians, Assistant Indian Affairs Commissioner William Zimmerman Jr., said today.

He said the evacuees included both natives and white persons who have been in the islands as schoolteachers, weather observers and traders. He said he understood "a few" civilians had refused to leave, "but they were all given the opportunity."

Zimmerman said he knew of no compulsory evacuation order having been issued and explained that it was merely a case of residents of the area being allowed to return to the mainland if they desired.

The Pribilof Islands, lying in the Bering Sea, have not been mentioned in any of the Navy's communiques on the Aleutian situation and as far as is known the Japanese have not made any move into that area.

ALEUTIAN NATIVES USED TO INVASIONS

Few of Real Indians There
Because of Mixtures
With Other Races

ANCHORAGE, Alaska (Wide World)—When war came to the Aleutian Islands, the Aleut was not surprised. He is used to seeing invaders in his rocky, fog-sheathed islands.

He is used to seeing them come—and he is used to seeing them go.

The squat, slightly oily Aleut Indians have inhabited the islands of the Aleutian chain as long as their own records have existed or their fables been told. There probably never were very many Aleuts, and now there are even fewer, perhaps a dozen on Attu Island, occupied early in June by the Japanese, a few more on Kiska, which fell into Japanese hands a few days later. The other small islands of the chain stretching westward from the Alaskan peninsula have small Aleut villages, some of them occupied only part of the year.

No one knows who was the first invader of the Aleutians—perhaps the Aleut himself. Many scientists believe he originally was an Asiatic who made his way from Siberia in skin boats, to settle down to a diet of fish, sea-bird eggs and seal meat. Whether he actually liked this diet and the island weather—almost continuous fogs, wind that blows constantly and bitter cold—or whether he simply lacked the energy to move on, again no one knows.

But in any event, he was living there when the "Bostons," the New Bedford whalers, came.

They left some of their New England place names—and a few New England racial traces—in the Aleutians. They used the islands as refuges from Arctic storms and as whaling stations. They were a rough crew, and the Aleut suffered.

But he still was there when the Bostons left.

The American Confederacy was one of the next outlanders to show its colors on the Aleutians when the Confederate warship *Savannah*, a commerce raider, lurked there during the last few months of the Civil War. The *Savannah* stayed only long enough to shell a Union ship or two in the Gulf of Alaska. Some of the Aleuts may have heard the shelling, but they kept right on catching seals.

Imperial Russia was the most important of all the invaders, and its record extended over more than a half century. Beginning with the explorer Bering, Russian boats consistently used the Aleutians as a stepping-stone between Asia and Alaska. Their record is commemorated by such names in the islands as Massacre Bay. And one of the chief reasons they moved against other Alaskan Indians was that the supply of Aleuts for slaves was virtually exhausted.

A SEARCH FOR JAPANESE 'NUISANCE FORCES' IN THE ALEUTIANS



Small parties of United States troops are continually visiting hundreds of barren and isolated islands in the Pacific to check against possible enemy activity.

(U. S. Marine Corps)

American Army Forces Take Up Positions in Andreanof Islands

WASHINGTON, Oct. 3—Positions in the Andreanof group of islands in the Aleutians have been occupied without opposition by American Army troops with naval support, the Navy announced today. The movement took place "recently" and Army aircraft, including Flying Fortresses and pursuit planes now are operating from airfields in the islands. It was stated.

The exact place of the occupa-

tion was not announced but the westernmost island of the Andreanof group is only 125 miles east of Kiska, the main base held by the Japanese in the Aleutians. The easternmost of the group is 365 miles from Kiska, and 245 miles from Dutch Harbor, the main American base in the Aleutians.

The Japanese had not appeared in the Andreanof Islands, nor had the American Navy established bases there in the past. The islands, therefore, had no wharves or other Navy installations. The land is wild and has been uninhabited, except for occasional trappers. The terrain is forbidding, although there is sufficient open and level space for the establish-

ment of airfields. Most of the islands have high mountain peaks, and there are active volcanoes on several of them.

The Andreanof group forms a long chain, one of its islands being the southernmost of the Aleutians. It extends for 240 miles from Seguam Pass to Amchitka Pass. Despite the unpropitious physical aspects, the chain is strategically located to the advantage of a force operating against the western Aleutians, where the Japanese have clung to their foothold and have sought to consolidate and strengthen their position in the face of the harassing attacks by the United States forces.

Alaskan Indian Fashions Intricate Sled Model

By the Associated Press.

JUNEAU, Alaska.—Latest addition to the native arts collection in the Territorial Museum is a 5-ounce model of a Yukon dog sled composed of 241 pieces carved and fitted together by a Diomede Island Eskimo. It is made of black whalebone and white walrus ivory, the black runners having white sled shoes, and the black frames being fitted together with 51 bolts and nuts, tapped and threaded despite their tiny sizes, made of the white ivory. The sled is 19 inches long,

4 inches wide and 6 inches high.

The Russians were the last to practice a policy of extermination against the Aleutian natives, but they were not the last invaders. Gold-crazed prospectors on their way to Nome stopped off there, and some stayed. Scandinavian whalers and sealers followed the New Bedford route to the same islands. Some of them even left in the Aleutians native crewmen they had picked up in Hawaii. Sealing boats of nearly all the Pacific nations anchored there while slaughtering the Pribilof seal herds.

Finally, there have been the successive invasions of the salmon

cannery men. The first canneries used largely Chinese labor—and its traces were left in the islands. Japanese replaced the Chinese in later years, and Filipinos later replaced part of the Japanese—although Japanese-owned fishing boats continued to hang just over the horizon of the Aleutians until the present war began.

The mixture of races in the islands has left many an Aleut child more Asiatic than Indian. Fishermen say that the same mixture has resulted in some of the most beautiful native girls they have ever seen.

ALEUTIAN ISLANDS NO BARREN ROCKS

Correspondent Finds Soil Is Fertile, With Wild Vines and Grasses Flourishing

AN ALEUTIAN ARMY OUT-POST (Wide World)—The question, "What are we fighting for in the Aleutian Islands?" has been asked many times, and the easiest answers have been negative—there are no people, no trees, practically no animals, few homes, no farms.

But an assumption that the Aleutians are barren, worthless rocks is unjustified and arouses immediate opposition among persons who have lived or traveled extensively in the islands.

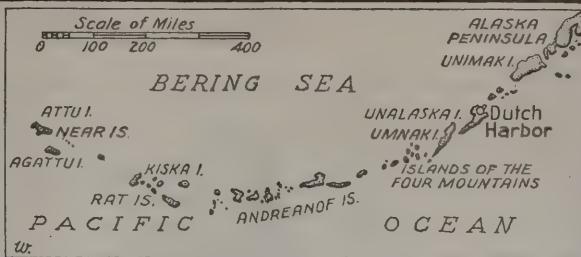
In the first place, the soil is extremely fertile, sandy loam, which as a matter of regularity grows wild pea vines and various grasses—almost all nutritious to cattle or sheep—waist high on a tall man. Wild rye has heads six inches long, various valuable herbs grow wild, including arnica, digitalis and others.

Natives have for centuries lived on the berries of the so-called ptarmigan bush and on the roots of various tubers when other food was unavailable. Caribou and reindeer, grow fat on the grass and sport some of the finest horn growths to be found anywhere.

In the few places where soldiers or trappers have planted tiny victory gardens as experiments, radishes, lettuce and beets thrive. Some of the soil seems lacking in lime, but that is its only apparent deficiency.

There are several explanations why trees are lacking. But whenever trees have been planted, they thrive. On one windswept isle, troops have planted a single sapling, surrounded it with a tight fence and dubbed it the Aleutian national forest. One small juniper-like tree grows naturally on some islands. It is a dwarf species only 18 to 24 inches tall—but a tree none the less.

Contrary to common opinion, the soil is not particularly rocky. True, volcanoes in places have thrown huge boulders for miles toward the beaches. True, too, that nearly every island is topped with some



kind of fog-bound, forbidding peak. But around the peaks and between the boulders are wild meadows that would make a Missouri mule chorale with delight.

There are several examples of what this chain can do as a stock raising country. On at least two islands, large bands of sheep have been grazed successfully. One band of 10,000 has had no food other than the natural grass in years and is thriving. The thermometer never strikes a point low enough to bother a hardy breed, and there are no predators to decimate the lambs in Spring. The sheepmen have just one chore—the annual shearing.

On another island, not actually in the Aleutians but close to them, a bull and half a dozen heifers were put ashore some fifty years ago. Today, their descendants form a sizeable herd, although they have been left entirely to themselves except for occasional killing parties.

As fur-growing country, the islands are unsurpassed. Wet winds and foggy days produce superior pelts. The blue foxes, whose origin is a matter of doubt, have multiplied consistently, providing a steady living for a number of white and native trappers.

The average Aleutian stream, six feet wide in September, is a frothy, living thing, with hump-backed salmon fighting for swimming room or floating drearily down after spawning. Close on the heels of the salmon are myriads of trout getting fat on the salmon eggs.

Along the salt water beaches,



sea food is plentiful. The spider crab frequently is six feet from toe to toe, and excellent eating. For codfish and halibut, it is only necessary to drop a hook over the stern of a boat and bait it with almost anything from a red rag to a chunk of bacon fat. Various other smaller fish are common.

In almost every bay, a half-dozen hair seals keep a constant curious watch on the world, and herds of fur seals—protected by the government—frequently wander by. Dead whales floating up on the beaches are regular olfactory menaces. Almost any beach will yield shells of both butter and razor clams.

Bird life is not particularly varied. Bald eagles float over some of the peaks and feast on the fish in the streams. An average day's bird counting might show a number of crows, a few larks, some field sparrows, a peculiar little brown wren, some ptarmigan (which look enough like grouse to

Conservation Policy To Protect Wildlife Assets in Alaska

Descriptions and illustrations of Alaska's big game, fur animals and birds are in "Mammals and Birds of Alaska," a circular issued by the United States Fish and Wildlife Service. The new publication sets forth the Federal Government's conservation policy for maintaining the Territory's valuable wildlife asset.

"It is significant," declared Frank Dufresne, the author, "that wildlife not only provided the main incentive for the colonization of Alaska by the Russian discoverers of two centuries ago, under the Stars and Stripes since 1867 has continued to play a leading role in the development of the Territory. This rich resource is now being managed in such a way as to guarantee its preservation indefinitely."

Dufresne is executive officer of the Alaska Game Commission, which functions as the operating agency of the Fish and Wildlife Service. This commission meets annually and recommends to the Secretary of the Interior suitable regulations with respect to hunting seasons, bag limits, establishment of game and fur districts and designation of areas as wildlife sanctuaries.

State Medicine for Indians

Medical service for the Indians and Eskimos is provided through the Office of Indian Affairs, which maintains close cooperation with the Territorial Department of Health, established in 1936, recalls The United Press.

have been frequently mistaken for them by soldiers), the usual thousands of sea gulls, the ordinary variety and sooty terns, plus some common mallards, teal and other ducks, some cormorants and a number of sea pigeons with yellow bills and little sense.

Climate, these islands are no paradise. The wind blows almost as much as it does in Kansas, the rain is even more constant than in the Pacific Northwest and the combination brings on a horizontal soaking that is no fun in either the Aleut or English tongues.

Lack of trees makes firewood and building materials a definite problem for a single settler or an Army. No coal has been found, and few other minerals have been mined although exploration is far from complete. Some volcanoes are active, and it is only twenty-seven years since the top of one—Mount Katmai, on the mainland but in the same geographical area—blew off with an explosion heard practically around the world. Mount Veniaminoff, even closer to the islands, has been in eruption within the last three years. Several peaks on the islands smoke constantly.

The chain is rugged, but not barren in any sense of the word. A Japanese journalist who visited Alaska several years ago was quoted as saying the chain could support 5,000,000 Japanese in comparative comfort.

Eskimos Build Igloos Against Air Raids; Elders Teach the Nearly Forgotten Art

By The Associated Press.

KOTZEBUE, Alaska, July 26.—Up here near the top of the world the war has revived an almost forgotten art, the building of snow igloos. The Eskimos are putting them up for air-raid shelters.

News from the battlefronts is big news in this village, shrouded in darkness, except for a few hours of dusk, during the Winter. Cabins may be almost completely buried in snow, but most of them are marked by radio aerial poles. The Rev. Paul C. O'Connor estimates that more than half the families in his congregation have radios, late models with three wave bands.

When Dec. 7 came, Kotzebue, usually drab and lifeless, reacted quickly to the news from Pearl Harbor.

The Eskimos imagined that Japanese were hiding behind every

cabin, Father O'Connor related. They took distorted views of the northern lights to be enemy bombers.

Meeting after meeting was held. A civilian guard was organized. They demanded that the priest silence the church bell and use it only for an air-raid alarm.

The old men of the village were commissioned to draw plans for building snow igloos, a lost art among the younger tribesmen, for bomb shelters.

Soon the young bucks were cutting snow blocks and fitting them into spacious, two-room arctic bungalows.

Supervising the job were elders, hopeful that when the bell tolls, and bombers ride out of the Arctic night, their families and sled dogs will be safe.

The Polar Times

Published June and December by the AMERICAN POLAR SOCIETY, Care American Museum of Natural History, Central Park West at 77th Street, New York, N. Y.

AUGUST HOWARD, Editor

THE POLAR TIMES highly recommends "The Polar Record," published January and July by the Scott Polar Research Institute, Cambridge, England.

The American Polar Society was founded Nov. 29, 1934, to band together all persons interested in polar exploration. Membership dues are one dollar a year, which entitles members to receive THE POLAR TIMES twice a year.

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IGLOOS FROM SNOW BUILT BY SOLDIERS

Better Than Pup Tents in the Arctic, Says New Manual Issued by Army

WASHINGTON (Science Service)—If you are worrying about keeping the house warm this winter, just suppose you stop a moment, unrinkle your brow and give a thought to the soldiers who will be out on patrol when winter settles down over inland Alaska. Some of them will be sleeping in snow igloos.

A new Army manual for the use of soldiers who must make war in snow and extreme cold, discussed in the new issue of *The Infantry Journal*, tells among other things how to build a dome-shaped snow house of the most approved Eskimo architecture.

The only tool needed is a long knife, the instructions state. A bayonet will do, although a slightly longer blade is better. A shovel for handling soft snow, however, is a good thing to have along. Snow should be firm and well-packed, but neither too warm nor too cold. If too warm, it gets "thawy" and won't stand up. If too cold, it tends to become a mass of loose ice granules, too porous to keep out the wind, and too good a conductor of heat to keep in the warmth.

The house should not be built on firm, bare ground; that is too cold. You need a floor of snow to insulate the house from the cold earth as well as snow walls to keep in the warm air. Your igloo, therefore, should be built on fairly deep snow.

Best size for snow blocks is about 36 inches long, 18 inches

Eskimos Interrupt War Work To Pick Winter Berry Supply

NOME, Alaska (AP)—Some 200 Eskimo women in the villages along the Arctic shore have in the last year produced 5,000 sealskin parkas for use of the United States Army. The money value alone is more than \$100,000 and the value to troops on Arctic posts is inestimable.

In addition to parkas, the Eskimo women have produced in smaller quantities fur boots, sealskin mukluks (high water-proof, cold-proof shoes), fur caps and gloves. Every garment is hand made, every one sewed with the peculiar twisted Eskimo stitch which is invaluable in a garment which will be wet and dry, cold and warm in rapid succession, and over and over again. Much of the sewing is done with sinew first chewed placidly by the seamstress.

But all operations were suspended for the berry picking season of about a month. Any fruit or fresh vegetable is at a premium among the natives even in summer in these latitudes, and in winter some fresh produce is essential. Thus, the packing into sealskin bags—where the berries keep fairly well in a sort of semi-fresh condition—is very necessary,

wide, and 5 inches thick. You set the first course of blocks on edge in a circle, slicing down the upper corners a little so that they will lean slightly inward. Working from inside the circle, you set the next course upon this, again the slight inward slope. A companion follows you around the courses as you build, chinking cracks with loose snow. Loose snow may be piled well up against the sides.

Cave Dwellers Visit Alaska

TELLER, Alaska, July 24 (AP)—Their annual pilgrimage unaffected by battles in the Aleutians 800 miles south, natives of little Diomede Island have crossed Bering Strait to market their trinkets and bolster the food supply of their rocky island home.

Four huge skin-covered canoes brought 130 men, women, and children to the Alaska mainland with heavy cargoes of ivory and seal skins.

The Diomede natives are cave dwellers on the rocky isle only a mile distant from Russia's big Diomede Island in storm-swept Bering Strait.

They arrived with their intricately-carved bracelets and other trinkets to find a ready market despite the absence of the usual tourist trade. Army and Navy personnel have been buying up the natives' products.

Their cargoes were tossed ashore

in heaps of rough sealskin sacks.

A chief of the island peoples said the only change in routine this war year was their avoidance of Nome, south of here. In the past, they have gone to the colorful one-time gold-rush town to feast on delicacies of the white man, to trade, and to see the movies and store windows.

From here, they will strike out over the tundra to hunt reindeer to supplement their food supply.

The natives cross the Strait with the men, women, and children all joining in the paddling. They have to launch their canoes from platforms at Diomede because of the absence of beaches along the formidable and rocky coast.

Diomede figured dramatically in a report that was widely circulated in prewar days. The natives brought reports of an airport development under way on Russia's big Diomede, only a rifle shot to the west. The story never was confirmed.

and even war work must stop while it goes on.

Other greens are picked at the same time, some of them to be preserved in pure seal oil in open buckets. The Eskimo house without a roomful of such preserves, plus dried fish and a dozen other similar delicacies, is practically no house at all.

Chief Spike has brought practically all of his able-bodied men from King Island to the mainland for war work—which is why he spends so much time in his office.

These Eskimos operate possibly the oldest communistic system on the continent, and wartime has not changed it materially. Most of their earnings go into a common tribal fund, from which are purchased the needs of the entire native community. Spike gains little if any personal profit from his transactions, but he is absolute boss of the men in his tribe.

Chief Spike and his aide—whose name sounds very much like Billiken—are proud of their war effort and of the men they have sent to the Army itself. No Eskimo, of course, would think of mentioning the work of a woman as of any account; but they are proud of their women's work, too.

And almost to a man, they ask each new visitor, "What more can we do?"

Getting the last block into place on the top of the dome is something of a trick. You trim the last irregular hole left at the top into an even shape, slip a suitably sized block out through it endwise, turn it and lower it over the hole like a lid. Then you trim edges until it fits neatly into place. A ventilating hole is cut in the roof afterward. As a touch of luxury, you may want to carry a wooden stove-pipe with you to slip through this.

You have now walled yourself entirely in. A door is cut by tunneling through the drift under the wall, so that you go in through a trench below the general snow level. The door, left open, and the chimney-hole in the roof, furnish good ventilation.

Four men can put up such a snow house in about an hour. And it is much cozier than any tent, for an overnight bivouac under Arctic conditions.

Attu a Hard Spot

WASHINGTON, July 31 — The Japanese have a triple problem in their attempt to occupy the westernmost of the Aleutian Islands.

They must land in rocky coves where only small boats can dock and then at great risk carry all their equipment over steep rocky trails and clean out areas for camps.

They also must feed the occupying troops by convoy over almost a 1,000-mile-long supply line through some of the most difficult navigable waters in the world.

NORTH'S VIOLET SHOW IS TRACED TO PLANTS

Single-Celled Algae Found to Live on Snow, Ice

WASHINGTON (Science Service)—Fields of red and purple snow in the northland are due to microscopic plants. These single-celled algae, one of the most primitive groups of living things, were investigated by Erzsébet Kol, Hungarian woman scientist working under a Smithsonian fellowship.

Her report of the vivid "blooms" in Alaskan mountain ranges has just been published here by the Smithsonian Institution.

In this forbidding arctic environment, she found nearly fifty samples of the tiny plants living in almost infinite numbers on perpetual ice and snow.

Collecting living specimens, Miss Kol headed for her laboratory high in the Swiss Alps, where she planned to cultivate and study this strange form of life.

War has now severed communication with Miss Kol. Except for news of the loss of her living specimens, no word has been received here on how the war has affected the project.

Her previous reports indicated that some of these algae are very fussy about their home surroundings. One would not live on ice. Another would not live on snow. And there are striking changes in algae types, depending on whether surrounding mountain slopes are acid or alkaline in composition. This is probably due to their reliance on air-borne particles of decomposing and shattered rock for food. Dust dissolves slowly in the moisture on snow or ice surfaces, providing the minerals essential for life.

The snow and ice plants perhaps serve as the chief food for some other form of life, it is believed, which, in turn, supports higher forms. The life cycle of the vividly colored organisms remains unknown, however.

Dr. Ales Hrdlicka, Smithsonian Institution anthropologist who has probably spent more time than any other white man in the Aleutians, describes Attu Island as a "bleak, almost barren rock" capable of supporting only a few natives who have existed solely by fishing.

The only animal life consists of a few foxes. Some waterfowl nest on the island, and ravens and eagles are fairly common. There are no trees on the island, thus no timber for buildings, and only sparse brush for building fires.

Most of the island is covered by close-growing heath, chiefly crowberries, although in a few valleys covered by the heavy snows of winter some other plants, such as larkspur, violets, anemones and buttercups are found. Several kinds of berries form the principal plant food available.

He expressed the opinion that even if American bombers let the Japanese alone, they still would have a tough time existing.

2,000,000 SEALS ON MENACED ISLES

Many Foxes Also on the Pribilofs, 280 Miles West of Dutch Harbor

Announcement that the United States Navy has evacuated civilians from the Pribilof Islands, along with residents of the Aleutians west of Dutch Harbor, brings this group within the recognized potential war zone of the far North Pacific.

The Pribilofs are situated in the Bering Sea about 220 miles north and slightly west of the Dutch Harbor base in the Aleutians, a National Geographic Society bulletin points out. Lying off the broad entrance to Bristol Bay—280 miles from the main body of Alaska—they guard vital sea and air routes through Bering Strait to Russia's North European front, as well as to Northeastern Siberia. The bulletin continues:

"The Pribilofs are volcanic fragments, including two main islands, St. Paul and St. George; two uninhabited land dots, Otter and Walrus, and a number of islets.

Navigation There Perilous

"Like most of the groups in these northern waters, the Pribilofs are generally rocky and often precipitous along the shore. Navigation thereabouts is considered extremely dangerous because of the frequent fogs, shifting winds, lack of good harbors and anchorage grounds, and many hazardous ledges, reefs and rocks offshore. Even in peacetime, these islands were closed to all except United States shipping, as well as to unauthorized visitors."

"St. Paul, with an area of about thirty-five square miles, had a population in 1939 of 299 people; St. George (twenty-seven square miles) had 183. It is the animal population, rather than human, however, that has made these islands famous. The Pribilofs are known as the world's greatest fur seal rookeries, with additional resources of valuable blue foxes and innumerable water fowl.

"Every year, beginning in May, hordes of ocean-going fur seals come to breed in these fog-bound islands, whose damp, cool climate and protected rock ledges are ideal for their needs. In August, 1940, the annual census report listed more than 2,000,000 seals.

"The Pribilofs were discovered in 1786 by the Russian fur trader for whom they were named, when he was seeking the breeding place of such fortune-making sea animals. Eighty-one years later, when the United States took over the islands with the Alaska purchase, vast numbers of seals still remained. But ruthless killing off of the herd, including the shooting of mother seals outside the three-mile limit, dangerously reduced their numbers in the following decades.

"The islands, therefore were



ALEUTIAN PATROL—The going is rough and treacherous in northern seas, and crews transferring from patrol planes or naval scouting ships anchored in calmer waters outside breakers get a taste of it when going on or off duty in the Aleutians.

turned into a seal reservation in 1911, under the authority of the United States Bureau of Fisheries, while further protective steps were taken under international agreements, which also provided for a division of profits.

"In peacetime the Bureau of Fisheries not only gave the inhabitants of the Pribilofs employment, but also looked after their needs in housing, food, clothes, medical care and transportation. In Summer the natives' chief job was to segregate and kill a certain proportion of the bachelor seals, processing their skins and turning the carcasses into meal and oil. Winter is the period for fox trapping.

"Some 65,000-odd fur sealskins were taken in 1940; a thousand fox skins was the Winter average."

Seal Harvest Is Shared

The Pribilofs, island chain in the Bering Sea, have been the source of the supply for much of the world's seal furs for years.

Under a forty-year-old treaty, which the Japanese gave notice of abrogating in 1940, the United States, Great Britain and Japan divided the skins. The American Government directed the operations and the skins were sold in the United States. Japan's split of the proceeds was 15 per cent.

The largest of the four islands are St. Paul, thirteen miles long and six miles in its maximum width, and St. George, ten miles long and four miles wide.

The four rugged islands in the group—St. Paul, St. George, Otter and Walrus—have not a single harbor among them, and the treacherous waters of the Bering Sea offer anchorage only when the wind is blowing from the land, ac-

Eskimos Ignore Starvation To Fulfill War Pledge

HEADQUARTERS, Alaska Defense Command (UP)—A remote Eskimo village, fired with patriotism, ignored a grave threat of starvation to fulfill its pledge in the war against Japan, it was disclosed today.

The villagers had promised to complete a secret military project before the Northern Sea froze this year. They kept men, women and children working day and night while their food stocks dwindled.

Major Marvin Marston of Seattle told today of the hardships they accepted with stoic courage. Fearing they could not meet the deadline, they lived on seaweeds and mussels and allowed no one to take time for hunting and fishing. They killed a fifth of their dogs so the others might live.

Marston arrived at the project just before it was completed.

"The village food caches were empty," he said. "Not a thing had been laid by for the winter and the men, women and children were weak from hunger. Eager to do their part in the war effort, they had put in every waking moment on the project entrusted to them.

"Eight or nine hundred sled dogs lay at the end of their chains starving, yammering day and night, many of them too weak to get to

cording to navigational information available at the Navy Department.

The United States, however, apparently has done considerable development work on the two main islands, St. Paul and St. George, which have the largest and most numerous seal rookeries in the world.

their feet."

Marston said that on the night of his arrival he attended "what must have been one of the grimdest councils ever held among Arctic tribesmen."

"I saw Sinyookee, a gaunt Eskimo medicine man, arise and, weaving on his feet from hunger and weariness, make a halting suggestion," Marston said. "He told them to kill every fifth dog in the village and feed the carcasses to the other dogs."

The dogs represented the entire wealth of the village but the Eskimos readily agreed.

"In the morning, 100 dogs were shot," he said. "They were skinned because there had been no hunting, and there were no skins for winter garments. The lean carcasses were apportioned among the living dogs. I saw a trio of pups gnawing on a part of the carcass of their mother."

Marston urged the hunters to seek game. They refused but he finally persuaded a 14-year-old boy to leave. The youth killed a seal and tramped into camp at dusk with meat. The villagers celebrated that night.

They completed their project before the deadline and the Army banished fears of starvation by bringing them provisions.

When Marston left, the village chief told him:

"Don't worry about the Japs. If they come here we shoot them. Like wolf—right between the eyes."

HANSON, BYRD AIDE, IS KILLED IN CRASH

**Commander, Chief Radio Man
on Antarctic Expedition,
Perishes 'in the North'**

WASHINGTON, Aug. 11—Commander Malcolm P. Hanson, a Naval Reserve officer who was chief radio man for Rear Admiral Byrd on the 1928-30 Antarctic expedition, has been killed in an airplane crash "somewhere in the North," the Navy stated today.

Told World of Byrd's Work

For his work as radio engineer and chief wireless operator on the Byrd first Antarctic expedition, Commander Hanson won the gold medal of the Veteran Wireless Operators Association. The award was made by radio flashed across 11,000 miles from the Crystal Studio at the Radio World's Fair in Madison Square Garden to Admiral Byrd's camp at Little America on Sept. 27, 1929.

The award was made in recognition of Commander Hanson's achievements in keeping the expedition in touch with the world, besides his feat of clearing a long daily news dispatch to the receiving station of THE NEW YORK TIMES.

On the expedition he made measurements of the Kennelly-Heaviside layer, which affects propagation of radio waves by reflection. The work entailed a trip ten miles out on the Barrier in uncertain weather at 70 below zero and a stay there of forty-eight hours while observations and photographs were made.

On March 19, 1929, Commander Hanson accompanied Admiral Byrd on a hazardous rescue flight to Larry Gould, Bernt Balchen and Harold June, who had been marooned in the mountains of Antarctica after their plane had been wrecked by a gale. The entire group returned safely within several days.

Commander Hanson was responsible for the world's record in radio and aviation established on Jan. 25, 1929, when Admiral Byrd's plane, the Stars and Stripes, in flight 3,000 feet above the icy wastes surrounding the Bay of Whales in the Antarctic, conducted two-way communication with THE NEW YORK TIMES radio station in Times Square.

Commander Hanson, who engaged in aircraft radio developments and tests, had also assisted in the radio preparations for the Byrd-McMillan trip to Greenland in 1925, the Wilkins-Detroit Expedition and Byrd Arctic Expedition of 1928. He was in charge of radio equipment for Admiral Byrd's transatlantic flight of 1927.

Comdr. Hanson was widely known in Washington, since he had been in charge of the radio test lab-



Commander Malcolm P. Hanson

oratory at the Anacostia Naval Air Station from 1930 to 1937 and was associated with the Washington Institute of Technology in the study of instrument-landing in 1939.

Late in 1939 he was on active duty in the Bureau of Ships in the Navy Department and in January, 1940, was transferred to the Bureau of Aeronautics.

He was born October 19, 1894, of American parents residing in Berlin, Germany.

Naval records show that his father, Albert Parker Hanson, was a Milwaukee engineer and inventor who laid the first telegraph line across Iceland in 1890.

Comdr. Hanson attended the University of Wisconsin, leaving in 1917 to join the Naval Reserve for World War duty.

He was a radio electrician with shore station duties until the summer of 1918 when he was commissioned ensign and assigned to aircraft radio development duties.

From 1919 to 1920 he was a radio operator in the Merchant Marine.

He resumed his studies at the University of Wisconsin in 1920 and later constructed the first-owned broadcast station (WHA) and was an instructor in physics in radio.

In 1924, he came to the Naval Research Laboratory at Bellevue.

Surviving him are his mother, Mrs. Lida Hanson; his widow, Mrs. Euphrasia Hanson; five children, Malcolm, Jr., 13; Eric, 10, Richard, John and Ethel; two brothers, Earl Hanson, geographer and author, of New York and Washington; Donald Hanson, publisher of the magazine Woman's Day; and one sister, Miss Herdis Hanson of New York, head of the music department of the Ethical Culture School.

Peary Seaman Dies at 92

WINDSOR, Ont., Sept. 20 (CP)—Frederick M. Newbury, native of Newfoundland, who went on several famous expeditions, died at his home here today. He was ninety-two years old. He went to sea at the age of eleven and sailed at various times under Admiral Robert E. Peary, American Arctic explorer, and Sir Wilfred T. Grenfell, author and explorer. He came to Windsor in 1924. Three daughters, two sons, twenty-nine grandchildren and seven great-grandchildren survive.

MAX H. DEMOREST, GLACIER AUTHORITY

**Lieutenant, Who Left Career
as Educator to Aid Army,
Killed in the Arctic**

CINCINNATI, Dec. 10 (AP)—Lieutenant Max Harrison Demorest, one of the nation's outstanding authorities on glaciers, died in a far outpost of the arctic, his wife, Mrs. Rebecca Humphreys Demorest, disclosed today. He was 32 years old.

[It was announced by the War Department last night that Lieutenant Demorest was killed on Nov. 30 when a motor sled in which he was riding crashed through an ice bridge and fell in a crevasse.]

Lieutenant Demorest received his doctorate in philosophy from Princeton University.

Lieutenant Demorest, whose parents, Mr. and Mrs. Harry Demorest reside in Flint, Mich., was acting head of the Geology Department at Wesleyan University, when commissioned in the Army last July.

So remote was the spot in which he met death, Mrs. Demorest said, that in his last letter, received more than three months ago, he indicated he would write to her next in the Spring. Her letters to him, she added, were dropped by airplane.

Served in Perilous Arctic

A brilliant glaciologist, Dr. Demorest had, despite his youth, a splendid record of important research when he gave up last Summer the prospect of an unusually successful scientific career to serve his country in the Army. Danger was nothing new to him, and he had twice served as a member of scientific expeditions to the more perilous parts of Greenland.

Dr. Demorest, for the last several years before he became a soldier, had been engaged at Yale University in research into the internal mechanics by which large ice fields moved. In his researches he applied the techniques of the geological studies of rocks to ice, slicing the ice into thin sections which he examined under polarized light. In 1939 he shipped from Mount Ranier to Yale 350 pounds of glacial ice, carefully packed in dry ice in order to prevent melting.

Worked in Sub-Zero Chamber

Dr. Demorest worked at Yale in a sub-zero chamber, and while conducting his experiments often telephoned results to his wife at their home in New Haven so that she could record them.

One of his most important conclusions was that glacial ice moved by plastic flow rather than alternate thawing and freezing. The flow, he found, was brought about by molecular adjustments. In December, 1941, his paper, "Processes of Ice Deformation Within Glaciers," read before a meeting of



Lieutenant Max H. Demorest

the Geological Society of America, said: "Experiment shows that deformation of ice, even at the surface of a glacier, is primarily a result of flowage rather than of discontinuous movements on discrete shear planes."

Short and wiry, he was full of energy and enthusiasm for his work. He simply had to find out the most he could about the things in which he was interested.

His work at Yale was done with the financial aid of various organizations. It began in 1939 and he was a Yale Sterling Fellow in Geology in 1939-40, a National Research Council Geology Fellow in 1940-41 and a Guggenheim Fellow in Geology in 1942.

The Geological Society of America also aided him financially in his research. That society has just honored him by election as a fellow. Of the nation's 6,000 to 7,000 geologists only about 800 have been elected to the society and most of the members were elected after they were 35.

Born in Flint, Mich., on Feb. 18, 1910, he received an A. B. degree from the University of Michigan in 1934, an M. S. from the University of Cincinnati in 1936 and a Ph. D. from Princeton University in 1938. In 1930-31 he was assistant meteorologist and aerologist in the fourth Greenland Expedition of the University of Michigan.

He spent a year in Greenland, in 1932-33, as glaciologist and assistant meteorologist with the University of Michigan-Pan-American Airways Polar Year Expedition.

In 1934-35 he was an assistant in geology on the faculty of the University of Michigan's Summer sessions. In 1934-36 he was an assistant in geology on the University of Cincinnati's faculty. He was a geology assistant at Princeton in 1936-37 and an assistant professor of geology at North Dakota University in 1938-39. For a time while he was doing research at Yale he traveled back and forth to Middletown, Conn., in order to teach geology at Wesleyan.

He was a member of the American Geophysical Union. He wrote prolifically on his subject.

A child also survives.

MAJOR A. N. PARKER, BYRD PILOT, DIES

Marine, First Man Ashore on Initial Antarctic Expedition, Received Flying Cross

MIAMI, Fla., Nov. 30 (UPI)—Major Alton N. Parker of the Marine Corps Reserve, who accompanied Admiral Richard E. Byrd on his North and South Pole expeditions, died in his hotel room here today. Death was ascribed to natural causes. He was 47 years old.

A veteran airplane pilot who had more than 2,000,000 miles in the air, Mr. Parker had been affiliated with Transcontinental and Western Airlines since the company began air mail operation in 1930.

He leaves a widow and a son, Jack Parker of Kansas City.

Major Parker was with Byrd as a flier on the North Pole expedition in 1926. He was chosen to accompany the explorer on the South Pole expedition in 1928.

Decorated for Services

In 1930 Major Parker received the Distinguished Flying Cross for "extraordinary achievement as test pilot in a flight of the [first Byrd Antarctic] expedition which resulted in claiming new land for the United States."

The flight mentioned in the citation was made in 1929 when Major Parker acted as pilot for Rear Admiral Richard E. Byrd, head of



MAJOR ALTON N. PARKER

the first Byrd Antarctic expedition of 1928-30. The flight led to the discovery of the Edsel Ford range of mountains and the eastern boundary of the Ross Sea. Major Parker did not, however, fly either over the North or South Pole. In 1926 the late Floyd Bennett flew Admiral Byrd over the North Pole and on the South Polar flight of the admiral Bernt Balchen was the pilot.

In 1926, in a message to the late Lieut. Gen. John A. Lejeune, then commandant of the Marine Corps, Admiral Byrd said: "Parker indefatigable, able, courageous and credit to Marine Corps. Took every flight but one to pole. Greatly regretted could not take him on that flight on account too much weight for skis, though Parker more experienced flier land plane than Bennett or myself. His spirit has been most commendable."

Beat Them All Ashore

When, late in 1928, the men of the first Byrd Antarctic expedition quit their ship and landed for the first time, Major Parker was the first man to land. One version had it that Admiral Byrd gave him the honor because he was the senior United States Marine on the expedition. Russell Owen, covering the expedition for THE NEW YORK TIMES, wrote of the landing as follows:

"There was a scramble to be the first one over the side, and Captain Alton Parker of the Marine Corps won by a second. 'The Marines are always first ashore,' he yelled back. A moment later and the ice near the ship was covered with men, running to stretch their legs and pelting each other with snowballs."

On another occasion Mr. Owen described Major Parker as "a wily Southerner, quick as a cat, who has flown all sorts of planes from pursuit planes to lumbering craft."

After the dangerous and important flight leading to the discovery of the Mount Mountain Range, Admiral Byrd said of Major Parker: "Parker did his job perfectly. I knew what sort of a pilot he was, for he was at Spitsbergen with us on the North Pole expedition. He

PROF. FRANZ BOAS, SCIENTIST, DIES, 84

Held Chair of Anthropology at Columbia 43 Years—Emeritus Professor Since 1936

Dr. Franz Boas, Professor Emeritus of Anthropology at Columbia University and one of the world's leading authorities in the study of man and his inheritance, died there Dec. 21 of a heart attack during luncheon at the Men's Faculty Club. His age was 84.

Although he had retired from teaching in 1936, Dr. Boas at his death, was making a study of the relation between physical and mental development. His retirement from academic duties six years ago seemed only to free him for increased activity in the political field on behalf of intellectual freedom and democratic equality, in opposition to the dictatorships of Europe.

Dr. Boas was born at Minden, Westphalia, on July 9, 1858, the son of M. and Sophie Meyer Boas. He studied in the Universities of Heidelberg, Bonn and Kiel from 1877 to 1881 and received his Ph. D. from Kiel University the latter year. He had taken a keen interest in geography, and joined an expedition that sailed from Hamburg for the Arctic in 1883. It was then that he decided to take up anthropology as his life work, and he spent a whole year in a small Eskimo settlement in Baffin Land.

Upon his return to Germany he was appointed assistant at the Royal Ethnographical Museum in Berlin and also docent of geography at the University of Berlin.

In 1886 he came to the United States and began a work of anthropological research that extended over North America and Puerto Rico and lasted until 1927.

After fifty years of anthropological work, of which forty-three were as professor at Columbia University, Dr. Boas came to the conclusion that superiority and inferiority of race are fallacies.

Among the other books and treatises that Dr. Boas wrote were "Baffin Land," "Chinook Texts," "Indian Legends of the Northwest Coast of America," "Social Organization and Secret Societies of the Kwakiutl Indians," "Kathlamet Texts," "The Eskimo of Baffin Land and Hudson Bay," "Handbook of American-Indian Languages" (three volumes), "Tsimshian Mythology," "Kutenai Tales," "Tlingit Grammar," "Eth-

got very low gasoline consumption on the flight and handled the plane as only natural fliers can."

He Wore Gala Costume

On the flight Major Parker, delighted at the opportunity to do something unusual, wore gala garments, red and black checked lumbermen's pants. Major Parker was a flyer for twenty-four years.

Born in Hazelhurst, Miss., Major Parker enlisted in the Navy in June, 1917. It was at Pensacola, Fla., that he first met Admiral Byrd, then a naval lieutenant.



DR. FRANZ BOAS

nology of the Kwakiutl," "Keresan Texts," "Religion of the Kwakiutl Indians," as well as numerous scientific reports and contributions to magazines and newspapers.

Dr. Boas began his career as a physicist. After preliminary work at the Universities of Heidelberg and Bonn, he won his doctorate at Kiel with a thesis entitled "The Nature of the Color of Water." He knew that the sensation of color was subjective—that it depended upon qualities in an individual's brain rather than in the object viewed. This led him to wonder what effect the apparent blueness of sea water might have upon people living near the ocean.

He decided that Eskimos, because of their contact with the deep blue waters of Arctic seas, would be ideal subjects for such a study. Hence, in June, 1883, he embarked on a Scotch whaling boat for Baffin Land to pass more than a year among the natives of Cumberland Sound and Davis Strait. His research there convinced him that geography and other features of physical environment play an important role in determining the biological characteristics of human groups, and that the cultural conditions to which peoples are exposed produce, over long periods of time, important changes in human psychology and physique.

Observations Not Challenged
Many leading anthropologists later disagreed with Dr. Boas's emphasis on the effects of environment and cultural background on changes in human physique, as opposed to the importance of inherited characteristics. But they argued over the conclusions and inferences drawn from his measurements and not the validity of his scientific observations, for Dr. Boas was pre-eminent in his profession largely because of the extent and accuracy of his field work.

He was one of the first men to undertake first-hand study of the anthropology of North American natives, and he continued to carry on and direct this research throughout his career.

After his studies in Baffin Land, Dr. Boas returned to Berlin to become assistant at the Royal Ethnographical Museum and docent in geography at the University of Berlin. He left Germany in 1886 to conduct ethnological investigations among the Indians of British Columbia for the British Association for the Advancement of Science.

Capt. W. J. Peters, Carnegie Scientist

WASHINGTON, July 11

Capt. William John Peters, formerly chief magnetic observer at the Department of Terrestrial Magnetism of the Carnegie Institution and commander of the vessels Galilee and Carnegie, died yesterday at his home, 310 Rosemary street, Chevy Chase, Md. He was 79.

He entered the Geological Survey in 1884 as assistant topographer and was rapidly promoted through the grades. From 1903 to 1905 he was second in Capt. Peters' command of the Ziegler Polar Expedition and in charge of its scientific work.

In 1906 Capt. Peters was appointed chief magnetic observer and commander of the magnetic survey yacht Galilee by the Carnegie Institution and later served as commander of the survey yacht Carnegie. During his later years, until his retirement in 1931, he was engaged in study of the results of the ocean magnetic work and in other research work.



ARCTIC AREA SOON TO YIELD MUCH OIL

Aviation Gasoline Also to Be Produced at Refinery in Farthest North

TORONTO, Canada (Science Service)—Aviation gasoline and Diesel engine oil will soon be flowing through a new pipeline toward the Alaska highway from oil wells and the world's most northern refinery at Fort Norman on the Mackenzie River in Canada, 125 miles south of the Arctic Circle. Vast untapped tar sands in Northern Alberta are being mined for oil, gasoline, asphalt and coke.

The wells at Fort Norman have been in existence since 1921. They were little used, however, in fact were capped until 1930, when discovery of radium on Great Bear Lake shores brought aerial prospectors in vast numbers. Soon after the outbreak of war a new refinery was built at Fort Norman producing aviation gasoline and Diesel engine oil. This plant, according to Munitions and Supply Minister C. D. Howe, has now been expanded and will likely be in use for a longer period than just during the Summer, as it has since installation.

"An intensive study of the tar sands is under way," stated Minister Howe in Parliament. "Today we think of that area as a source of immediate oil production, provided the problems connected with its development can be solved rapidly and with some degree of certainty. Arrangements have been made to develop further the wells on the lower Mackenzie River at Fort Norman. Additional wells are being drilled, the refinery capacity is being increased and a short pipeline is being installed to bring the oil across to the location of the Alaska Highway."

From the sands along the Athabasca River in Northern Alberta Indians have since time immemorial used pitch to caulk their canoes. The first white men to come into the area in 1788 found the oil sands to stretch for miles, in some places found oil bubbling to the surface. Since the settlement of Alberta many attempts have been made to obtain oil from these oil-rich sands. Last year the successful commercial extraction plant began operations to obtain lubricating oil and gasoline from the tar sands.

The oil sands along the Athabasca River are considered by oil authorities to be one of the largest oil reservoirs in the world. According to Canadian Government geological estimates, the oil sands contain at least 100,000,000,000 barrels of oil. But it will be a big job to get it out.

Because of transportation difficulties and because no suitable extraction system had been devised, the oil sands remained unworked. These oil-saturated sands range in thickness from a few feet to 225 feet and in oil content up to 25 per

First West-East Voyage Made Through Northwest Passage

SYDNEY, N. S., Oct. 9 (P)—A new chapter was added to Arctic history today by eight hardy members of the Royal Canadian Mounted Police who completed the first west-to-east voyage across the top of America twenty-eight months after their eighty-ton auxiliary schooner St. Roch set out from Vancouver, B. C.

The bearded adventurers sailed quietly into this port yesterday to accomplish in reserve the feat which explorers of a bygone era had attempted unsuccessfully in their search for the Northwest Passage—short cut to the fabled riches of the Orient.

Only once in history has the east-to-west passage been sailed, that was by Captain Roald Amundsen, the Norwegian explorer, and five other men who crossed the North Atlantic in 1903 and emerged into the Pacific three years later. Amundsen has been missing in the Arctic since 1928.

Details of the Mounties' voyage were cloaked by official secrecy, the members of the expedition declining to divulge their purpose in undertaking the hazardous journey. They reported that one member of the original crew died on the way and was replaced by a man picked up at a lonely mounted police post which they paused en route.

[While the route of the St. Roch was not disclosed, The Canadian

Press said it was assumed to be like that of Amundsen in reverse. He entered Lancaster Bay, at the top of Baffin Land, and worked his way down Boothia Peninsula to King William Land. After a long stay there he traveled along the northern coast of the mainland to the Pacific.]

During most of the time since they left the west coast in June, 1940, the Mounties' only contact with the outside world was by radio. Though they carried a good load of provisions when they set out, they were forced to forage for food during their lonely wanderings among the ice floes, depending partly on seals and fish for subsistence.

Commander of the crew was Sergeant Henry Larsen, a Danish seaman who was active in northern trading before he joined the mounted police. Larsen is described by veteran northern mariners as "the best Arctic skipper alive."

Their vessel was built in 1928 in Vancouver and since then has been used largely for carrying supplies to outlying mounted police posts and to scattered settlers in the Far North. She was designed especially to withstand the rigors of the Arctic, being heavily timbered. Her hull is sheathed with copper over which is a layer of Australian ironbark—the only wood capable of resisting the grinding effects of ice floes.

FISH FREIGHTER FOUND ALASKA AIR ROUTE

Canadian Youth Gave Up Law Study for Aviation

WHITEHORSE, Y. T. (Canadian Press)—A fish-freighting job organized to supply business for a struggling young aviation company led to discovery of the all-weather air route to Alaska which is playing a part in fortifying America's defense outpost.

The man who organized the fish freighting was Grant McConachie, now, at 33, general manager of Western lines for Canadian Pacific Airlines. When 19 years old, he left a law course at the University of Alberta because law had no appeal to him compared with aviation.

McConachie, noted for his ability to get things done, had no money or connections. But he knew where there were two planes that could be purchased at a low price because an established aviation concern had rejected them. He interested a mining company in buying the machines to ship supplies to its mine.

cent by weight. They cover an area estimated at from 10,000 to 50,000 square miles.

A large part of the area is overlaid with shale and sandstone up to a maximum depth of 1,800 feet and underground methods of mining are not considered workable. The oil will not flow into wells fast enough to be pumped commercially. But erosion on the Athabasca River and its tributa-

ries has left benches that can be mined by open-pit methods.

The bituminous sands have produced a high quality of asphalt, which has been used for paving fairly extensively in the past and it is expected to be used for this purpose also on the Canada-Alaska Highway now being built.

They stretch for miles on each side of the river, covering roughly an area 115 miles north and south

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FINDS SOURCE DATA ON INDIAN TONGUES

Missionary Scientist Brings Back Material From Far North Areas

OPENS WAY TO NEW STUDY

PHILADELPHIA (Science Service)—A major source of materials for use in the study of North American Indian languages, until now unavailable to scientists, exists in scattered publications and manuscripts used by missionaries in their work through the immense territory stretching all the way from Labrador to the Pacific Coast and north to the last inhabited islands of the Arctic. At a recent meeting of the American Philosophical Society here Père Arthème Dutilly, missionary-scientist of the Oblate Missions and the Catholic University of America, described this hitherto neglected scientific resource and told what he was doing to round up the scattered material.

Missionaries of all creeds make more of an effort to learn the language of the tribes they work with than do traders, explorers and officials, the speaker declared. They stay longer with the people and have more difficult subjects to discuss.

From the very beginning of the Northern missions, Père Dutilly continued, priests and ministers have made a practice of reducing the languages of the various tribes to writing. There are several special systems for expressing the Indian languages, one or two of them very successful. In these written forms the missionaries have produced translations of the Bible, prayer and hymn books, catechisms and other things they need for their own work. Most of them are not generally known; some have never been printed, but exist only in mimeographed form, perhaps with the amendments and marginal notes of several different workers on them.

Père Dutilly, who has returned from his tenth Summer in the Far North, has undertaken to get all such materials together, making possible their reproduction in forms useful to students of languages. So far, he has assembled 145 published works and reproductions of fifty-two unpublished manuscripts, representing twenty-one distinct Northern Indian languages and dialects, plus Eskimo. This work has been sponsored by the American Philosophical Society.

The past Summer's trip was a "short" one for Père Dutilly, taking him only as far as James Bay, where he worked in the Cree and Montagnais Indian areas. His principal interest is in botany and he brought back a collection of something over 1,200 sheets of pressed plants, as well as a considerable number of mineral samples.

ROUTE TO RUSSIA VIA ARCTIC IS OPEN

Summer Enables Supplies to Be Sent From Seattle to Two Ports

Summer, which makes the North Atlantic supply lane to Russia more and more dangerous because the sun shines for all or most of the twenty-four hours, at the same time provides an alternate route on the other side of the world.

It is now possible for war materials from West Pacific ports to be shipped to European Russia by way of the Bering Strait and the waters north of Siberia. Such a route, points out a National Geographic Society bulletin, was first made available for regular freight traffic in 1935. It is open, however, for Summer navigation only. In Winter, Arctic ice is too tough a problem even for the most powerful ice-breaking machinery.

From Seattle, Wash., by the northern route, to the ports of Murmansk and Archangel, in European Russia, the sailing distance is roughly 6,000 miles. This westward journey is more than 1,500 miles longer than that, for example, from Boston eastward to Murmansk across the Atlantic and around Northern Norway.

It has the wartime advantages, however, of passing through Russian territorial waters for about three-fifths of the way and of being protected on the north by vast polar areas. German bases are far

'Lipsticks' Found Aid to Soldier in Extreme Climates

American soldiers serving in extreme climates are to be issued "chapsticks"—somewhat similar to women's lipstick—as a preventive against chapped skin or sunburn.

Quartermaster Corps technicians, it was announced on Oct. 24 have developed a two-inch cylindrical packaged medicament, which has been tested under simulated battle conditions.

The "chapstick" contains soothing ingredients, including camphor. All Army personnel will be issued them when on duty in cold climates, high mountains or deserts.

away; Japanese bases less remote, unless Japan can retain a foothold in the Aleutians.

Along the deeply indented and island-studded shores of Russia's Far North the passage from Bering Strait to Murmansk is about 3,600 miles, to Archangel 3,680 miles. On their way, westbound ships pass by Wrangel Island into the East Siberian Sea; thence across the Laptevikh and Kara Seas, and finally into the more familiar and traveled Barents Sea, north of Archangel.

Much of this latter sea, even in Winter, remains ice free—the result of a branch of the warming Gulf Stream which flows into it and keeps Murmansk port open the year around. The chilly central and eastern waters of the Arctic route formed the chief obstacle that had to be overcome.

Russians Grow Food On 70th Parallel

Possibility of growing oats for fodder in the Arctic has been demonstrated by an experimental planting of 60 acres on the Nirlish State Farm, most northerly in the world, it is reported in Moscow, Russia.

The farm is on the 70th parallel in the zone of eternal frost, where night lasts nearly two months. Orchard trees bloom during the short summer, but they are still young and bear no fruit. Potatoes, cabbages, onions, carrots and sugar beets are grown successfully in the open fields. Tomatoes, cucumbers and spinach are raised in hot-houses. An experiment with melons is pronounced encouraging. Livestock thrives and is rapidly increasing.

64 Dutch Seamen Safe After Ordeal in Arctic

Lost Ship in Convoy to Russia; Cast Away on Barren Isle

LONDON, Oct. 10 (AP)—Sixty-four Dutch seamen who were cast away on the barren northern shore of Novaya Zembla Island, high in the Arctic, after losing their ship in a convoy to Russia have arrived here. Aneta, Dutch news agency, reported today. It said the men had received special leave to recover from their experiences. One seaman lost his legs from frostbite.

The men said they abandoned their bomb-crippled freighter, bound for Archangel, when she ran out of ammunition.

In their lifeboats, they chanced upon an American freighter which could not take them aboard but replenished their food supplies. After six days, the boats reached the north coast of the island, which juts far into the Arctic north of Russia's Arctic coast.

Tests Atop Mt. McKinley

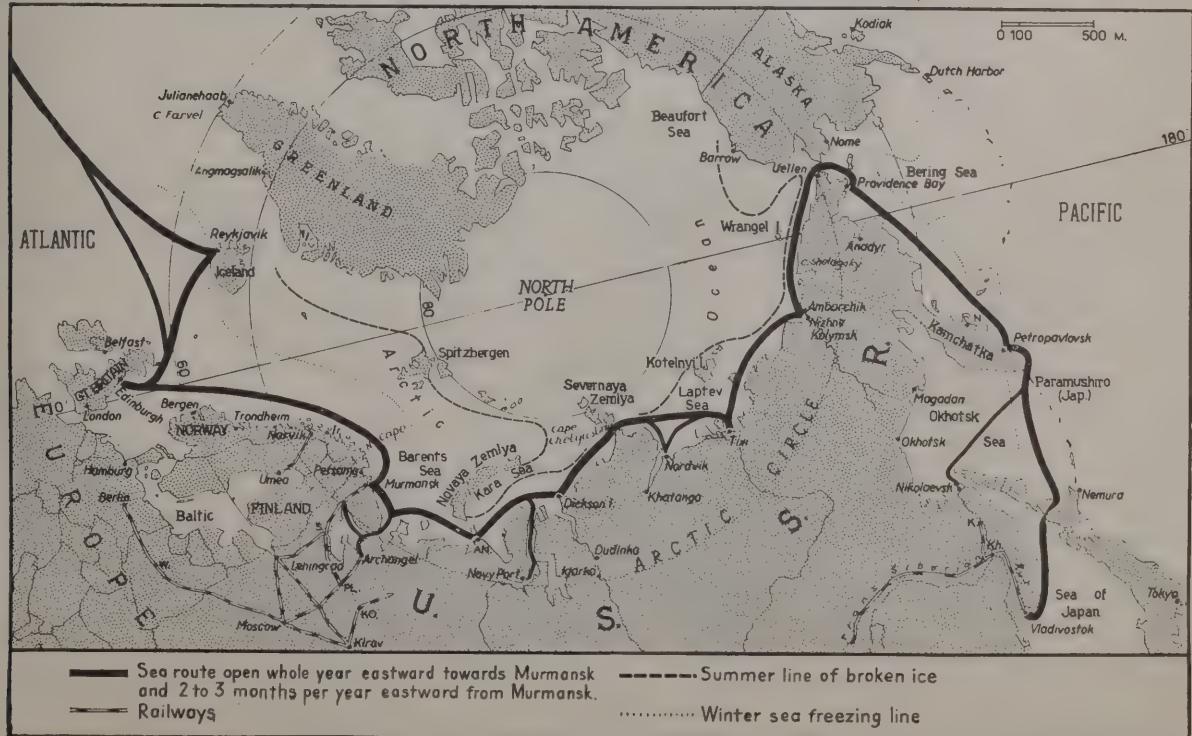
Officers and Scientists Try Out Winter Clothing and Equipment

WASHINGTON, Oct. 14 (UP)—Army officers and scientists climbed North America's highest peak, 20,300-foot Mount McKinley, in Alaska, last summer to test Army winter clothing and equipment, the National Geographic Society revealed today. The announcement said seven of seventeen members of the expedition reached the summit, the third time in history the feat has been accomplished.

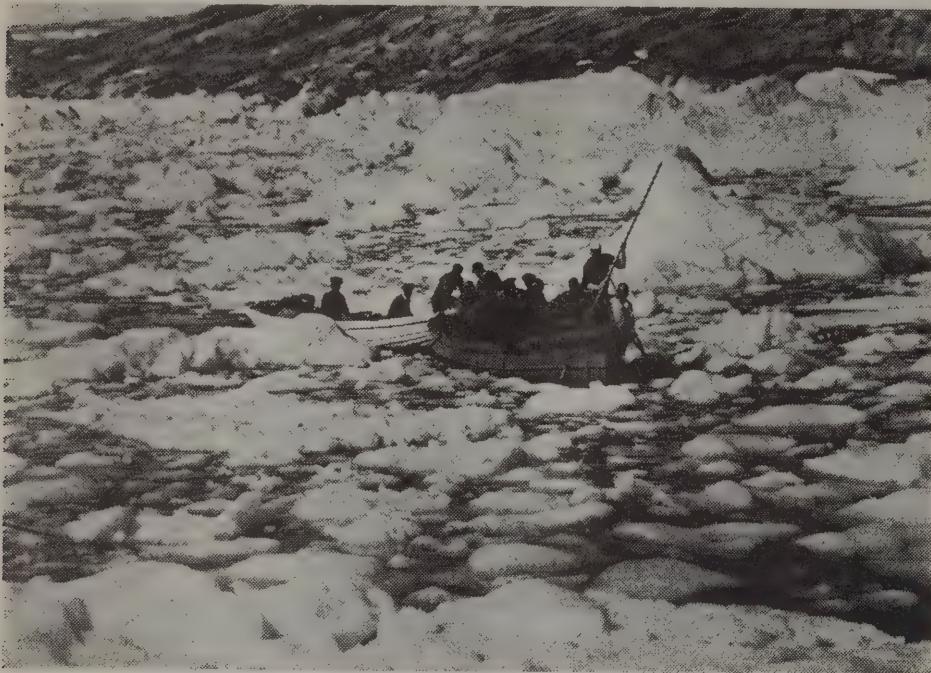
The expedition, made up of representatives of the Quartermaster Corps, the Army Air Forces and the Royal Canadian Air Force, established a testing camp at the 18,000-foot level. The camp was supplied by parachute packages dropped from planes operating out of Fairbanks, and more than 100 items of equipment were tested. Details were confidential, but the party reported much of the equipment made an "excellent showing."

Arctic Library Is Acquired

WASHINGTON (Science Service)—One of the most notable of private libraries on the Arctic, collected over a period of many years by a well known Canadian Arctic explorer, the late Captain J. E. Bernier of Quebec, has been acquired by Pére Arthème Dutilly Canadian missionary-scientist, and brought to the Catholic University of America, in this city. The library comprises about 800 bound volumes, many of them rare, as well as many reprints and pamphlets bearing on all scientific angles of the Arctic.



Coast Guardsmen Rescue Army Flyers in Greenland



United States Coast Guard

Like the painting of "Washington Crossing the Delaware" is this dramatic photograph of the Coast Guard rescuing United States Army fliers who were forced down on the Greenland ice cap.

BALCHEN ASSISTS IN 2 RESCUE FEATS

**With Navy Pilot He Saves 15
Army Airmen Marooned on
Ice Cap in Greenland**

WASHINGTON, Aug. 6 (AP)—Two daring rescues of fifteen stranded Army airmen from the bleak and treacherous ice cap of interior Greenland were disclosed by the Navy today in an announcement crediting the accomplishments to Lieut. Col. Bernt Balchen of the Army and Lieutenant A. Y. Parunak of the Navy.

Thirteen of the men were members of a crew of a Flying Fortress that had been forced down about 100 miles inland from a Navy base. They were taken out safely on July 6 after Colonel Balchen had led them across alpine-like icefields to a temporary lake, where Lieutenant Parunak picked them up in his Navy PBY patrol plane. The next day the lake that had made this rescue possible had disappeared.

Two weeks later a similar operation by Lieut. Parunak and Colonel Balchen brought about the rescue of Colonel Robert W. C. Wimsatt of Washington, D. C., and his sergeant, unidentified. Their light plane had made a forced

landing on the edge of the ice cap, near a regular lake, while they were on patrol duty. Colonel Wimsatt had been injured in the landing and the speed of the aerial rescue probably saved his life.

Colonel Balchen decided that Lieutenant Parunak and he should designate their joint enterprises as the "Greenland Cooperative Salvage Company."

Land Rescue Impossible

Lieutenant Parunak, 32 years old, of Pitman, N. J., and of Warrenton, Fla., learned of the forced landing of the big Army bomber when a weak radio message came through in late June. The location of the plane was fixed at 100 miles inland from the Navy air force safety patrol base where Lieutenant Parunak was stationed, but the intervening ice, slashed by thousands of deep crevices, made land rescue virtually impossible. The men apparently could be reached only by air.

The naval officer consulted with Colonel Balchen at a near-by Army base. Colonel Balchen advised flying the necessary supplies to the men. After dropping the supplies, Lieutenant Parunak made survey flights over the territory for a week, seeking primarily a place to land with his big flying boat. Then, the Navy account said, a "miracle" happened. About twelve miles from the crippled B-17 a "dimple" formed on the ice and filled with water running from the icy slopes around it.

This lake was discovered on July 3 and Lieutenant Parunak decided it was deep enough to support his plane and just barely long enough to permit a take-off. At his base

camp he stripped the plane of all possible equipment and took aboard a minimum of gasoline as well as snowshoes for the stranded crew.

The airmen who accompanied Lieutenant Parunak on the flight were Ensign John C. Snyder, 24, Memphis, Tenn.; Oliver L. Leininger, aviation machinist's mate first class, of Mason City, Ill., and Frank R. McEnroe, aviation radio man first class, of Washington, D. C. The plane also carried Colonel Balchen and Sergeants Joe Healey and "Dutch" Dollerman of the Army Air Forces, all three veterans of the North.

Army Party Put Ashore

The plane alighted safely in what the Navy called the "first intentional landing" on an ice-cap lake. Colonel Balchen and Sergeants Healey and Dollerman were put ashore. Lieutenant Parunak then took off and dropped the snowshoes and other supplies for the B-17 crew.

The overland rescue party reached the B-17 on the morning of July 5.

Colonel Balchen insisted that the men be tied together with an Alpine rope. This proved a wise precaution, because one man broke through the crust and dangled helplessly over a deep crevice until he was pulled out by his comrades. The trip to the lake was completed, in twelve hours; then it was discovered that ice had formed against one shore to cover about half the lake and limit take-off space.

Lieutenant Parunak landed the PBY, however. He took on eight survivors, and with all available

Three Airmen Saved 45 Days After Crash In Greenland Ice

By the Associated Press.

LONDON, Aug. 1.—The crash of an American bomber in Northern Greenland and the rescue of its crew of three in an adventure reminiscent of an old-fashioned melodrama of the Arctic was disclosed tonight through the British Air Ministry.

The crew, Ferry Command Pilot J. Shaw Webb of Vermont, Navigator Robert Franks and Radioman Louis A. Caldwell, both of the RAF, had flown a Lockheed Hudson from Montreal to Newfoundland. There they got an urgent call to make a survey flight over Northwest Greenland.

They completed the mission but encountered a sleet and electrical storm which crippled all navigation instruments. Then one of the two engines went dead.

Crashes Through Ice.

Webb tried twice to come down on ice-covered sheets of inland water, but the wheels broke through and he had to climb. Finally the gasoline was exhausted and he had to land. The plane's nose tilted forward.

"With a roar like thunder it crashed through the ice," Webb said.

"We were getting ready to swim when we saw and heard something of the kind which only happens in story books.

"Heading toward us across that wilderness of mountains, ice and water was a team of dogs, and behind them a file of men."

It was an American detachment sent to establish a post eight months previously.

Eskimo Village Nearby.

They told the flyers there was an Eskimo village nearby, and not another one for 500 miles in any direction.

Their radio signals were picked up and relayed by trans-Atlantic planes.

For 45 days rescue was impossible because there was no place for a plane to land. Finally an 80-mile-an-hour wind cleared the ice from several miles of water, leaving space for a flying boat to alight. The rescue plane also brought an 8-month collection of mail for the American ground force.

power finally got the big flying boat into the air again. He later praised Ensign Snyder for having extracted the last measure of horsepower from the engines by skillful handling of the throttles.

The next trip proved not so difficult because the changeable weather had by then lengthened the waterline of the lake. The remaining men were flown back to the Navy base, and the next day reconnaissance showed that the lake had drained away down a freshly opened crevice.

WASHINGTON, Aug. 6—Bernt Balchen, the pilot who accompanied Rear Admiral Richard E. Byrd on several explorations, was promoted today to a colonelcy in the Army Air Forces.

Specialist on Climate Called to Army Duty

The Army has called to duty one of the country's best known "climatic specialists," Dr. Paul A. Siple of Erie, Pa., who served as geographer with Rear Admiral Richard E. Byrd on his three Antarctic expeditions.

Commissioned a captain in the Quartermaster Corps, Dr. Siple will advise the Army on "cold-climate clothing." With United States forces now in Iceland, Greenland, Alaska and other Arctic areas, the Army is seeking all available data on materials to keep men warm and fit for service.

PEARY PENNANT TO FLY

New Escort Vessel to Use Lost Destroyer's Flag

WASHINGTON, Oct. 27 (AP)—The Navy announced today that the pennant from the main mast of the destroyer Peary, sunk off Australia in February, would fly again from the mast of a new Robert E. Peary, an escort vessel now under construction at the Consolidated Shipbuilding Company, Orange, Texas.

The pennant, the only relic remaining from the Peary, was salvaged by Lieutenant William J. Catlett Jr., of Canton, Miss., who was attached to the ship.

The new ship will be sponsored by Mrs. Josephine D. Peary, widow of Rear Admiral Robert E. Peary, Arctic explorer.

What You Buy With WAR BONDS

The Quartermaster's Department of the Army must provide clothing for our soldiers to fit every clime. In Alaska and in Iceland, a regular issue is the parka, a fleece-lined coverall fitting up over the head, designed to combat the frigid temperatures. A parka costs \$8.50.



It would be comforting to know that your purchase of War bonds is providing some intrepid soldier or airman with the warm clothing so necessary in Arctic regions. Help pay for these parkas through your purchase of War bonds every payday. At least 10 per cent of your income is required to help meet the war cost.

(United States Treasury Department.)

Jean Potter Reports Upon Our Neglected Sourdough Country in "Alaska Under Arms"

ALASKA UNDER ARMS. By Jean Potter. New York: The Macmillan Company. 194 pp. \$2.50.

By FREDERICK GRAHAM

ALASKA doubtless will retain many of its frontier characteristics for a long time to come, but it's a safe bet it will never again be so completely neglected and misunderstood by the United States. The war has made our government aware of the vast Northern Territory and thereby changed our official attitude toward it, and Jean Potter's "Alaska Under Arms" (and similar books which are bound to follow) may help alter the popular conception of the sourdough country.

Miss Potter, who went north on assignment for Fortune magazine shortly before our entry into the war, admits that she knew as little about Alaska before visiting it "as most Americans." But she wanted to know what it was like; she wanted to see the people and learn how they lived and, most of all, she wanted to learn firsthand the strategic value of the Territory in global war. The result is a good job of reporting; a book that is part travel literature and part interpretation of what Alaska means to us and to Japan and Russia. And frequently, mostly by implication, it is an arraignment of our government for knowing and doing so little about the rich area it bought in 1867 for a mere \$7,200,000.

As the northern anchor of our western defense triangle of Alaska, Hawaii and the Panama Canal Zone, the Territory of Alaska is of tremendous importance. It flanks any northeastern move toward the North American continent, thus making any such attack dangerous to the enemy. With its westward curving line of Aleutian Islands it is a possible approach for attack on Japan, though there are factors which reduce this aspect of its value more than many believe. And it is, which is of prime im-

portance, a sluice gate through which American-made munitions can be poured into Russia. Although obviously handicapped by the rigid Army and Navy censorship, Miss Potter has been able to give a good idea of what Alaska means to us right now and may mean in the future.

It was not until the Spring of 1939, Miss Potter points out, that Congress made its first appropriation for Alaskan defense, and this a mere \$4,000,000 for a cold-weather experimental station at Fairbanks. But it was the Summer of 1940 before Congress got around to appropriating \$2,900,000 for a base at Dutch Harbor in the Aleutians. As late as the Spring of 1940 the only armed force in Alaska was two companies of infantry at Chilkoot Barracks, in the southeastern section—and oil has been found!

Anthony Dimond, Alaska's non-voting Delegate to Congress, had been howling in season and out for Alaskan military defenses, but no one ever seemed to hear him. According to Miss Potter, there "are not over two dozen men in Congress today who have been to Alaska, most of them on short trips." When the first American troops arrived in Alaska in the Spring of 1940 the big air base at Anchorage was an open field. When the military program got under way Alaska sorely lacked adequate airfields and was without radio ranges, beacons and other modern aids to aviation. In a territory about twice as big as the State of Texas only two fields had night beacons.

Most of those things have been taken care of, now, or are being taken care of. The Army and Navy and the Civil Aeronautics Administration are building bases and emergency fields; putting in radio ranges for night and bad-weather flying; installing beacons and setting up weather stations. Alaska is perhaps the most airplane-conscious area in the world, thanks to "bush" fliers, who usually fly "contact," but will fly al-

most any place, any time. And what airfields and navigation aids and good weather data will do for the Territory after the war may amaze the world.

Alaska's chief problem, as Miss Potter found out and stressed, is transportation. Interior Alaska is almost entirely dependent on aerial travel.

Lack of transportation is also tied up with the backwardness in developing the great natural resources of Alaska. Gold mining and salmon fishing are not the only sources of wealth in the Territory, but they do produce wealth that can be shipped out profitably. The Territory is estimated to have billions of tons of low-grade coal deposits; large deposits of high-grade iron ore have been discovered; chromite, antimony, tungsten and tin are being mined; millions of acres of fine timberland lie practically untouched in the southeastern section—and oil has been found!

One of the most serious defects from the point of view of national defense is the sparse population. About half of Alaska's population of 73,000 is made up of Eskimos, Indians and Aleuts. In the event of an invasion this would mean that the Army and Navy would have to fend for themselves, Miss Potter points out. No native industry or agriculture would be there to supply Army and Navy, and no outraged natives would be ready to grab the family rifle and take to the woods to carry on guerrilla warfare.

Miss Potter concludes her report on Alaska with the statement that "the United States has never had a thoroughgoing policy for Alaska," and there's no arguing with that. But when Secretary of State Seward wheedled Congress into purchasing Alaska from Russia he had a policy in mind. He believed the Territory was necessary for the expansion of American empire in the Pacific. He was, of course, thinking in terms of commerce. But if a United States push westward from Alaska is ever made, it is more likely to be of a military nature.

Whaling Museum Opened

COLD SPRING HARBOR, L. I., Sept. 6—The Whaling Museum, recently completed in this famous old whaling community of the last century, was formally opened to the public last week. The leading exhibit is a fully equipped whaleboat. Many implements used in the whaling industry have been gathered from private homes.

Byrd Autogiro to Scrap Heap

PHILADELPHIA, Oct. 7 (AP)—An autogiro used by Rear Admiral Byrd on his second Antarctic expedition will be dumped on the city's growing scrap metal heap tomorrow. The owners, Maurice L. Strauss and Emanuel Rosenfield, president and vice president of Pep Boys, sold the craft to Byrd, then bought it back after the expedition ended.

What Eskimos Call Themselves

The natives on the arctic shores of North America do not refer to themselves as Eskimos. Instead, they use the word Innuit, which, in their language, means "men" or "people." The name Eskimo was bestowed on them by their neighbors, the North American Indians, and means "eaters of raw flesh."

Greenland—Integral Part of Our Defense

GREENLAND. By Vilhjalmur Stefansson. Illustrated by photographs and drawings. 338 pp. New York: Doubleday, Doran & Co. \$3.50.

By PHILIP AINSWORTH MEANS

THE prospective reader of this book on Greenland who inclines to doubt its timeliness and practical value can quickly convince himself of both by reading its last two chapters first. Having done so, he will know that it is well worth his trouble to turn back to the beginning and to read carefully the whole of this stirring work by our most distinguished authority on all matters pertaining to the Arctic and sub-Arctic areas of America and Europe.

The sixteen chapters of this sightly volume give us an impressive general survey of the historical and geographical facts about Greenland, from long before the time of Pytheas (about 325 B. C.) right down to April, 1941, when Greenland became an integral part of the defense system of the United States. In other words, we find here a good deal more than 2,500 years of American history; for, as the book makes very clear, Greenland has always been a part of America.

The history of Greenland is not only long but also very dramatic. In the Middle Ages that vast and remote land was a link in the chain that connected Europe to America. As the book strikingly shows, Norway (with some help from the Irish and other peoples) settled Iceland, Iceland settled Greenland, and Greenland discovered and explored American mainland regions. The question of lasting settlements in mainland America is touched on here only slightly because necessarily, and rightly, the emphasis falls on Greenland itself.

The first two chapters of the book discuss, respectively, the geographic preliminaries and the prehistoric discoveries of Greenland. Here we are told the essentials of the geographic features of the country and of its natural history. To this are added ample data on the primordial peopling of Greenland from the west by human stocks and cultures which, proceeding from Eastern Siberia, worked their way across the northern side of the American continent to Greenland. The Eskimos arrived in Greenland by this route not more than 2,500 years ago. Rightly, Mr. Stefansson stresses the admirable adjustment of Eskimo culture to



A Fleet of Eskimo Kayaks

A photograph from "Greenland"

the difficult environment even in the earliest times, and he has much of interest to say about their boats, their hunting and fishing and their way of living.

Even more interesting is Chapter III on Greek knowledge of Greenland. Here the emphasis lies chiefly on Pytheas of Massilia (Marseille), about 325 B. C. In a ship as good and as large as Columbus's Santa Maria, Pytheas studied the foggy and ice-fringed waters east of Greenland. His writings, now lost to us in their original form, long exercised a powerful influence upon geographers. All this is as fascinating as it will be novel to many readers.

In Chapters IV to XI we have the mediaeval history of Greenland, which is the part that many readers will find the most absorbing of all. In the time before, in and after the sixth century, Irish voyagers were interested in Greenland. This is followed by an even more impressive account of Greenlander history from the time of its first occupation by Icelanders about 890, who made two settlements on the west coast, down to 1261-62, when Iceland and Greenland ceased to be republics on aristocratic lines and became provinces under the crown of Norway. Greenland remained a Norwegian colony until after 1500. At that date the connection with Europe, which had been

ous for two centuries, faded away. The country was left to itself, with the natural result that its Norse population and culture gradually shaded off into Eskimo-like culture and habits. It is a pity that nothing is said here regarding the efforts of King Magnus of Norway to bolster up the waning faith of Greenland in 1354. The King was as horrified by the situation as was the church, and at least a little should have been said here about this. But at any rate we have a particularly interesting chapter, XI, about medieval European knowledge of Greenland.

Chapters XII and XIII tell the history of Greenland after it was once more linked to Europe in the late sixteenth century by the explorations of Frobisher and others. In this period much magnificent exploration was carried out by men of various nations, and it is here narrated in a manner worthy of so thrilling a subject. In 1721 the noble-hearted Norwegian, Hans Egede, gave Greenland the opening of its modern period by going there as a missionary of the Lutheran faith, with the idea of establishing the Protestant creed where, so long ago, the Catholic faith had struggled valiantly.

Chapters XIV and XV, by telling of the new explorations of all Greenland and by describing the new settlements that were made in the eighteenth century, prepare

the way in a vivid manner for Chapter XVI, in which it is made abundantly clear how and why Greenland is of capital importance to the United Nations and their cause at the present time.

In discussing the strategic importance of Greenland Mr. Stefansson says that in the final analysis Greenland's value "is no doubt in its size and in its geographic position. It reaches farther east than Iceland; it reaches as far south as Oslo, Norway, practically as far south as the north tip of Scotland. Together with Iceland it dominates the middle of the North Atlantic, for Iceland is about as far northwest from Scotland as Greenland is northeast from Labrador; and the two, Iceland and Greenland, are so close together that a ship near the middle of the strait between them can see both from one location, without benefit of mirage."

"From these two well-placed lands our planes and ships can swarm forth in an emergency. From them are conveniently maintained patrols that close the whole gap between Newfoundland and Labrador on the west, Norway and Scotland on the east. And these lands do not merely harbor our planes and ships; they give us also the largest single contribution to that knowledge of weather which we need for the proper operation of our fleets of air and sea in the combat areas

in and east of the North Atlantic."

As for the temperature of Greenland, Mr. Stefansson points out that Winter temperatures on the coast are, generally speaking, "those with which we are familiar in nearly half of the States of the Union and in literally every province of Canada."

In short, the story of Greenland is moving and heroic to a degree rarely equaled even in countries which do not cling precariously to the northernmost margin of civilization. Mr. Stefansson has grasped firmly the entire vast and difficult subject, and he has laid it before us with skill, thoroughness and vitality.

Alaska in the Past

New York Herald Tribune

THOUGH the phrase is hackneyed and the connotation is in disrepute, the fact remains that Alaska was first settled as an outpost of empire, and its history shows how empires are really made. Alaska might have fallen to any one of three empires. The life work of one man, Aleksandr Baranov, tipped the balance. If his colony had failed in the beginning Alaska might have become part of Canada, under the British flag. As it was, Baranov made good the formal claim which enabled Russia to sell it to the United States.

Actor Chevigny tells the story in "Lord of Alaska" (Viking, \$3).

Runaway Boy

Significantly, Baranov began with neither rank nor influence. His father was a backwoods trader, near the Finnish border, who did not even rate membership in the official merchant guilds. Young Aleksandr ran away from home at fifteen to Moscow. Apparently he could read and write; he was clever with his hands and eager for knowledge. He improved his education, learned accounting with a German firm and ventured on his own. Extraordinarily, he went to Siberia and started a glass factory. Then he accepted the offer of a dubious but expansive firm named Golikov-Shelekhov to cross over to Kodiak and found a trading post and colony there. He went. He was then forty-three; the year was 1790. He intended to stay five years and hoped to get out with a competence. He remained thirty years and never saw Russia again.

Siberian Frontier

Siberia had been added to the Russian dominions by frontier hunters and trappers in flight from the tyranny of the Czars, beginning with Ivan the Terrible. With the physical spaces of the wilderness to give them leeway, they extended Russian rule to the Pacific. There they learned of the rich possibilities of sea otter, seal and fox furs from the Aleutians and Alaska for the China trade. The Irkutsk merchants asked Catherine the Great to claim Alaska by right of discovery. She refused. But she had already lifted many previous restrictions on industry and commerce. So two different firms ventured to colonize on their own.

Nothing Stopped Him

Baranov's company never sent enough supplies nor stuff of proper quality for the absolute needs of the situation. He had to build, organize and trade all at once. He could not pick his own assistants; a number of unhappy serfs were sent to him, and these mutinied in despair. The Aleut Indians were friendly, but the mainland Kolosh were hostile and fierce; for years he was at war with them off and on against heavy odds. He built the settlements of Sitka and New Archangel and Fort St. Michael. Right at the beginning he built a ship, when he had neither tools nor iron nor cordage nor canvas; and he had to kidnap an English captain to supervise the work.

Ships were wrecked; epidemics raged; occasionally conceited young officials arrived from Russia, and to them Baranov had to pay deference because they had rank in the peculiar Russian bureaucratic system while Baranov had none. But in due time Baranov was made governor, with accordant social status. He took a pathetic pride in a couple of second-class decorations. For some years no word came from Russia, during the Napoleonic wars, but Boston ships came, and Baranov got his furs out at a profit. He corresponded with King Kamehameha of Hawaii, and dreamed of founding a trading post down there.

Paper Revolutionaries

The queerest things happened to Baranov. He had left a wife in Russia, evidently without regrets. In Alaska he lived with an Indian girl, a

chief's daughter, presented to him in treaty alliance. But for the sake of the colonists he asked to have priests and monks sent out; a zealous priest converted Baranov's consort, so that she felt morally obliged to leave him and their two children, since he could not marry her.

But the strangest episode was the "revolution" that didn't come off. After 1800 he began to get a few men of education in his colony; he didn't know it, but some of them were filled with vague revolutionary ideas, and they formed a secret society, planning to kill Baranov and his family, seize a ship and transport the whole settlement to Easter Island. They were the kind of planners who would put such a scheme on paper. The plot was revealed and forestalled, but Baranov never could comprehend what it was all about.

The Real Empire Builder

He was released from duty too late; he died in Java on the way back to Russia in a warship. He was rather slight in build, fair-haired, straightforward and truthful, hot-tempered and capable of carrying a load of hard liquor. In the course of thirty years he had built up trading stations to a value of several millions of dollars and had made a net profit for his company of more than three million dollars. Not one dishonest entry was found in his accounts. He gave away most of the money that came to him personally. He gave Russia a great province. He made it possible for Russia to have bought California, but that never happened.

What did happen was that after Baranov the bureaucrats took over. The company petered out, and they sold the country. Empires are made by free enterprise and strangled by bureaucracies.



Hector Chevigny

Most Northerly Citizen

FIFTY YEARS BELOW ZERO.

By Charles D. Brower. Illustrated. New York: Dodd, Mead & Co. \$3.

IT was women's corsets that sent Charles D. Brower into the Arctic regions of Alaska in 1883. With bone from a single whale bringing as high as \$11,000, Alaska was a place for both adventure and profit. Now, after almost four decades in the Far North, Mr. Brower has a whale of a story to tell in his autobiography, "Fifty Years Below Zero."

He lived with the Eskimos during the end of their Stone Age, when—except for a few rusty guns—they hunted with weapons of flint and whalebone and warmed their snow houses with whale-oil lamps. He is still living in Eskimo country today. The weather is the same, but airplanes, wireless, wooden houses, hospitals and schools have been added to the scenery.

In an introduction to this autobiography, Vilhjalmur Stefansson says "on and off for the last half century Charlie Brower has been Uncle Sam's most northerly citizen." As such, Brower has led a life of quick-paced adventure. Whaling took him north and the fur trade kept him there. Whenever there was excitement or disaster Brower seems to have been around. He rescued crews of wrecked whalers. He casually made trips which, if made now, would be regarded as epic journeys. He discovered areas that have been "discovered and rediscovered" ever since. He was a friend of Amundsen, Stefansson, Rasmussen and Wilkins. He argued with Eskimo devil-drivers and Christian missionaries. He

kept a daily journal and in it is recorded what white man's diseases and white man's whisky did to his Eskimo friends.

The Far North was this former ship officer's country from the time "he had a strange, exhilarated feeling to see from a ship's deck North America on one side and the dim outlines of the Siberian hills on the other. For a time in his chosen land (what a place for a boy born in Manhattan!) he lived a life that made the forecastle of a whaler seem like paradise.

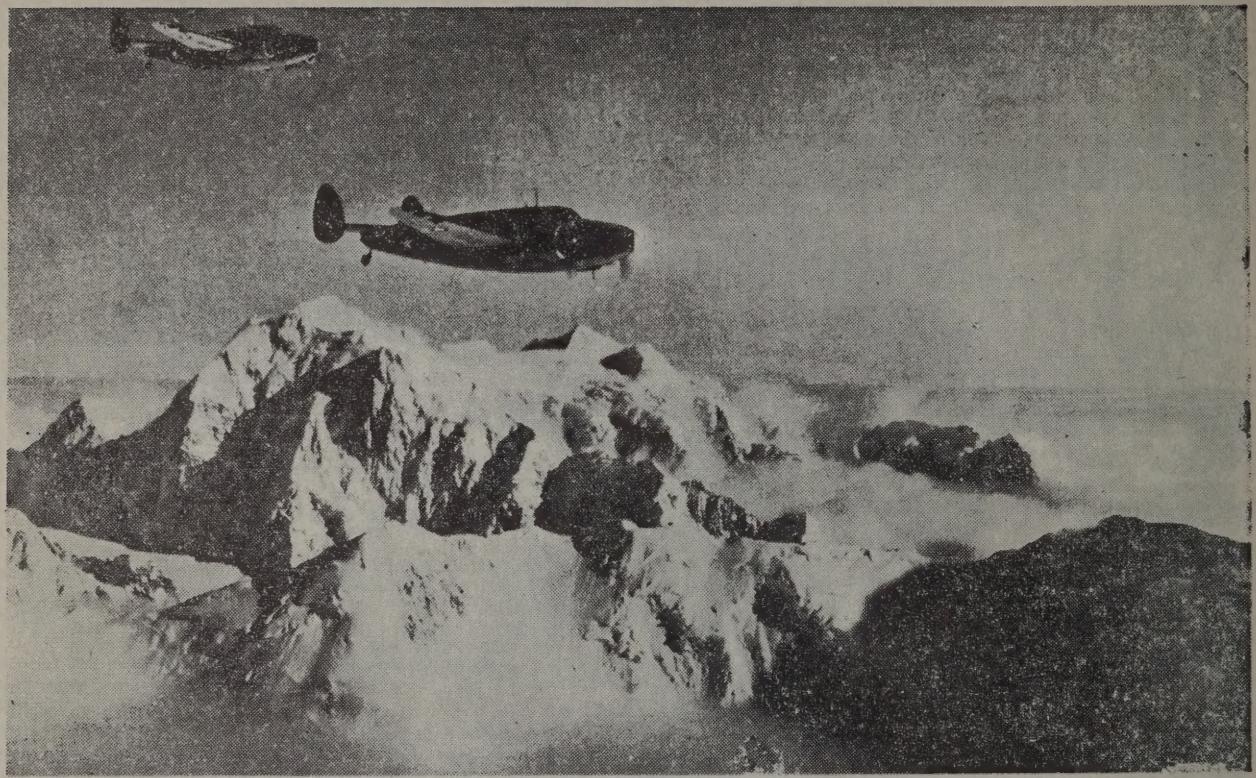
His story is markedly straightforward and modest. Being alone in the snow brought forth no philosophy, and trekking in bitter weather brought forth no lyrical prose about snow and ice, but he got where he was going.

Philip J. Farrelly and Lyman Anson have collaborated in whittling to a third the enormous manuscript put together during Winters when the gales howled around Barrow—gales in which Charlie Brower says he can still hear "the rhythmic beat of the devil-driver's drum and the dying swish-ssh of a bowhead whale." Here is a story of such a life that it is easy to wish for more chapters.

R. E. BERRY.

Old Byrd Ship to Serve in War

WASHINGTON, Aug. 14 (AP)—The War Shipping Administration said today it had requisitioned the old barkentine New York, once used by Admiral Richard Byrd. The vessel will be reconditioned at Cleveland for "active war work." The barkentine has lain idle in Lake Erie for many years. WSA spokesmen said a report that the vessel would be fitted out as an ice-breaker was not correct, and added that the actual nature of her wartime duties could not be revealed.



Wings of Defense Over Continent's Northern Outpost



OLD AND NEW—Three heavy American Army trucks and a dog sled come to a road junction on the snow-covered Alcan highway that connects the United States and Alaska overland

through Canada. Both modes of transportation are used extensively by American forces supplying our Northern posts.